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GRAIN and RAIL IN WESTERN CANADA



THE REPORT OF THE GRAIN HANDLING AND TRANSPORTATION COMMISSION

 Government of Canada Gouvernement du Canada
Hall Commission Commission Hall

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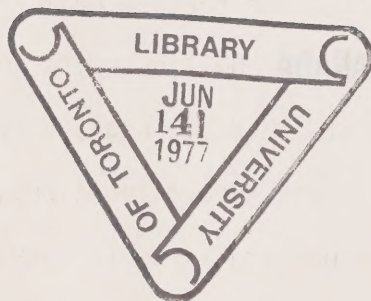
IN

WESTERN CANADA



VOLUME I

Publication
Government



April 18, 1977.

The Honourable Otto E. Lang, P.C., M.P.,
Minister of Transport, and Minister
Responsible for the Canadian Wheat Board,
House of Commons,
OTTAWA, Ontario.

Sir:

We, the Commissioners of the Grain Handling and Transportation
Commission, appointed by Orders-in-Council PC 1975-872 and PC 1975-1067:

To inquire into the rail needs of communities,
the economies of a modernized rail system and the pro-
bable conduct of producers and elevator companies in
changing circumstances for the purpose of making recom-
mendations concerning the future role of that portion
of the rail network identified for further evaluation

Now submit our Report, which the Commission believes will improve and
increase the capacity and efficiency of the Western grain transportation
and handling system for performance of its export functions, and will
also improve the economic development opportunities in terms of agricul-
tural processing, manufacturing and natural resource development of
Western Canada.

A compendium of our major research projects will be submitted
as a separate volume within two weeks. A third volume, consisting of
relevant statistical material is in preparation and will be available
before the end of May.

Curdall
H. Loh.
P. B. Brown

[Signature]
[Signature]
[Signature]

GRAIN AND RAIL

IN

WESTERN CANADA

GRAIN AND RAIL IN WESTERN CANADA

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CHAPTER 1

A. THE COMMISSION

- i) Appointment of Commission
- ii) Terms of Reference and Objectives

B. THE INQUIRY PROCESS

- i) Organization
- ii) Public Hearings and Submissions

A. THE COMMISSION

i) Appointment of Commission

Transportation has always played a vital part in the Canadian grains industry. Canada's unique geography, the location of its major grain growing areas, and the sheer size of the country have, since the earliest days of agriculture on the prairies, made it incumbent upon Canada to have not only a good grain handling and transportation system, but the best system it could afford to meet its needs.

The unique Canadian situation is unlike any other major grain growing and exporting country. Canada is absolutely dependent on rail transport to move grain from where it is grown to export position.

The prairie grain growing area is landlocked, about 800 miles from the nearest port, surrounded by formidable geographic barriers; on the west, the Rocky Mountains; on the north, a waterway normally used only 12 weeks a year; on the east, the rugged terrain of the Canadian shield and a river system open only about eight months of the year.

Hand in hand with these limiting geographic features are the significant increases in production and export of western grains and oilseeds over the past few years, to the point where three years in a row Canada's handling and transportation system handled approximately one billion bushels annually. To do this has placed

an added strain on a system that is essentially unchanged from when it was completed 50 years ago.

When the prairie grain handling system was built, it was in a different era and meant for different conditions and levels of production.

Some forecasters tell us that by 1980, for Canada to maintain her share of world production and trade, western producers could be faced with the production of 1.5 billion bushels a year. This was undreamed of 50 years ago.

This is not to imply that there have been no changes in the grain handling and transportation system over 50 years. In addition to the establishment of the Canadian Wheat Board and delivery quotas, there have been others. One is the block shipping system, introduced by the Canadian Wheat Board and the industry. Another is the appointment by the federal government of grain movement coordinators to expedite traffic at the Thunder Bay and Vancouver ports. A third is the purchase by the federal government of a fleet of six thousand grain hopper cars, with two thousand more now being contracted for. A fourth is the amalgamation of grain elevator companies and the reduction in numbers of elevators, and now the emergence of the so-called inland terminals.

But none of these changes have been enough. To date, no one has, in a concrete way, come to grips with some of the more fundamental problems in the grain handling and transportation system. One of the more basic of these is the deterioration of the branch

rail lines in the prairie provinces, and the aging of primary elevators built a half century ago.

Before 1933, the railways were free to abandon branch lines as they saw fit. That year, an amendment was passed to the Railway Act requiring the railways to obtain permission to abandon from the Board of Transport Commissioners. During the Second World War, from about 1941 on, the needs of the war effort brought further abandonment proceedings to a halt. After the war, there was a need for the railways to upgrade many of their facilities and substantial investments were made in many areas, but not on branch lines. In that same period -- the late 1940's and early 1950's -- little thought was given to the existence of the overbuilt branch line network and its relationship to alleged financial losses arising from the statutory grain rate.

It was not until the MacPherson Commission in the late 1950's and early 1960's that the magnitude of the branch lines problem was identified.

In the early 1960's, the railways applied for a number of branch line abandonments, leading to concern in many quarters over the type of system which would be left after such piece-meal abandonments.

The Commission also led to the development and passage of the National Transportation Act in 1967. With the intention of passing legislation providing a more comprehensive and reasonable basis for branch line abandonments, the government requested the railways

to place a moratorium on branch line abandonments in the prairie provinces.

The railways agreed and from 1963 to the passage of the Act in 1967, only four cases were dealt with. Following passage of the National Transportation Act, the federal government passed an Order-in-Council which prohibited the railways from applying for abandonment of all lines in Western Canada except 1,839 miles. In July, 1973, at the Western Economic Opportunities Conference in Calgary, it was announced that abandonment of these miles was also prohibited and the entire system was frozen until January 1, 1975.

In December, 1974, the federal government announced that a basic network of 12,413 miles of line in the prairies was protected until the year 2000 called Category "A" lines; 525 miles of line called Category "C" lines which were no longer in use were left unprotected; and, finally, 6,283 miles of line designated as Category "B" lines were frozen for at least a year -- this freeze has now been extended until June 30, 1977.

To undertake a series of Regional inquiries in areas served by the 6,283 miles of branch lines in Category "B", and make recommendations as to their future disposition, the Government appointed this Commission of Inquiry under Part I of the Inquiries Act by Order-in-Council No. PC 1975-872.

Certified to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 18 April, 1975.

WHEREAS there is an express need to improve and increase the capacity and efficiency of the western grain transportation and handling system for the performance of its export functions;

AND WHEREAS the Government of Canada has guaranteed 6,283 route miles of branch lines in the provinces of Manitoba, Saskatchewan and Alberta against abandonment until at least January 1st, 1976 in order to provide an opportunity for assessing future transportation requirements.

AND WHEREAS it is desired to provide a means for investigating the future disposition of the branch lines in question.

THEREFORE, THE COMMITTEE OF THE PRIVY COUNCIL, on the recommendation of the Minister of Transport and the Minister responsible for the Canadian Wheat Board, advise that, pursuant to Part I of the Inquiries Act, Mr. Emmett Hall of Saskatoon, Saskatchewan, be appointed Chief Commissioner and Mr. R.E. Forbes of Brandon, Manitoba, be appointed Commissioner:

- 1) To inquire into the rail needs of communities, the economies of a modernized rail system and the probable conduct of producers and elevator companies in changing circumstances for the purpose of making recommendations concerning the future role of that portion of the rail network identified for further evaluation; and
- 2) For the purpose of reporting in respect of the matters referred to in paragraph 1) to receive evidence from any person, any interested agency, group or corporation, any representative of the federal, provincial, regional or municipal government and any representative of any jurisdiction outside Canada who desires or may be invited to give evidence.

The Committee further advises that:

- (a) The Chief Commissioner be authorized to adopt such practices and procedures for all purposes of the inquiry as he may from time to time deem expedient for the proper conduct of the inquiry and to vary those practices and procedures from time to time;
- (b) The Commissioners be authorized and requested to sit at such times and places within Canada as the Chief Commissioner may from time to time decide;
- (c) The Minister of Transport in consultation with the Minister responsible for the Wheat Board be authorized to designate a Secretary of the Commission and such further and other inquiry officers, clerical and office assistance as may be necessary to aid and assist the Commissioners in this Inquiry;
- (d) The Minister of Transport be authorized to provide such space for officers and hearing rooms for the Commission as the Chief Commissioner may deem necessary or advisable;
- (e) The Chief Commissioner following the conclusion of each regional inquiry submit a report and recommendations to the Minister of Transport and the Minister Responsible for the Canadian Wheat Board with all reasonable dispatch; and
- (f) The Commissioners be authorized to exercise all powers conferred on Commissioners by Parts I and III of the Inquiries Act.

(Mr. R.H. Cowan of Rosetown, Saskatchewan, Mr. Lloyd Stewart of Rock Glen, Saskatchewan and Mr. Rheinhold Lehr of Medicine Hat, Alberta were appointed on May 9th, 1975 by Order-in-Council) PC-1975-1067.

ii) Terms of Reference and Objectives

a) Purpose

A Commission of Inquiry has been appointed under the provisions of Part 1 of the Inquiries Act consisting of a Chief Commissioner, four Commissioners, four Inquiry Officers and a Secretariat in order to undertake a series of regional inquiries as specified by Order-in-Council number PC 1975-872. In conducting its investigations, the Commission will be primarily concerned with an evaluation of rail requirements, the response of grain producers, elevator companies and the communities to changing circumstances, and the socio-economic impact of an evolving network.

b) Powers of the Commission

The Commission is empowered to conduct hearings in the areas concerned, to summon witnesses, to require the production of documents, to receive submissions orally or in writing and to assume all other powers applicable under Parts 1 and 111 of the Inquiries Act. The Commission shall make recommendations to the Minister of Transport and the Minister Responsible for the Canadian Wheat Board.

c) Terms of Reference

In view of the complexity of the regional rail network and the diversity of the Prairie economy, the Inquiry Commission will devise an appropriate regional breakdown for the evaluation process. The regionalization methodology will reflect some subdivision based on such criteria as may be chosen by the Commission.

For the purpose of ensuring the maximum degree of public awareness concerning the nature of the inquiry process, a Commissioner or a designated representative will visit communities in order to:

- 1) explain the composition and powers of the Inquiry Commission;
- 2) explain the rationale employed for the regional breakdown and indicate the precise region into which each community falls;
- 3) explain the procedures to be adopted for public hearings; and
- 4) indicate the timing and location of public hearings.

One or more Commissioners will hold hearings at centres in each region in order to give everybody concerned the opportunity to express their views and to present arguments with regard to the matters under study. Hearings will be held at such times and places as the Commission may determine.

In conducting a comprehensive evaluation of regional transportation requirements, the Commission shall give full consideration to the implications of adjustments to the total grain handling and transportation system as they relate to the following areas:

- 1) the grain producers, in terms of the farm to elevator trucking patterns, trucking costs and the level of elevator and rail service;
- 2) the communities as they relate to provincially determined rural development objectives and overall requirements for transportation and basic infrastructure planning;
- 3) the elevator system in respect to past, present and anticipated trends in elevator location, technology, costs, land use

regulations, servicing requirements and the period of time required for making adjustments to grain handling facilities;

- 4) economic development opportunities in terms of agricultural processing, manufacturing and natural resource development;
- 5) railway network planning, the impact upon locomotive and equipment requirements of railway operation under various network configurations, such as track improvements, joint running rights, line ownership transfers, construction of spurs and connecting lines and reciprocal routing agreements;
- 6) overall impact upon the regional and national economies of making changes to railway network configurations with specific reference to financial implications and any changes in cost allocation between the parties concerned;
- 7) the need to ensure a consistent and objective approach taking one region with another.

In developing the areas of investigations, there will be close consultation with the Snavely Commission and work will be carried out in such a manner as to ensure the exchange of relevant data.

d) Recommendation Function

Following the conclusion of each regional inquiry, the Commission will submit a report and recommendations to the Minister of Transport and the Minister Responsible For The Canadian Wheat Board. These will permit lines or portions thereof to be placed in one of the following categories:

- 1) Reallocation of certain lines to the basic network for protection until the year 2000;
- 2) Retention of certain lines for a period to be determined to permit the realization of anticipated developments;

- 3) Retention for a period to be determined to facilitate regional adjustment and to permit completion of related infrastructure programs;
- 4) Incorporation of certain lines or portions thereof in a more rational network structure;
- 5) Removal of abandonment prohibition from certain lines at a date to be determined subject to the provisions of Section 254 of the Railway Act.

Without limiting the generality of the foregoing, the Commission may make supplementary recommendations which could relate to:

- 1) The physical condition of railway plant and equipment;
- 2) The status of railway right of way after abandonment;
- 3) Highway and road programs;
- 4) The planning priorities of the grain handling industry;
- 5) Car allocation;
- 6) The composition of the basic network as initially defined;
- 7) Construction of new linkages and interconnections to permit a more rational network structure;
- 8) Other matters which could relate to other matters relevant to the Inquiry.

B. THE INQUIRY PROCESS

1) Organization

The Commission established its headquarters at Saskatoon, with Regional Offices at Medicine Hat, Saskatoon, Regina and Brandon.

Hon. Emmett M. Hall, C.C., Q.C.	Chief Commissioner
R. H. Cowan	Commissioner
R. Lehr	Commissioner
R. Forbes	Commissioner
L. Stewart	Commissioner
J.M. McDonough	Executive Director

Research

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Information

V. Murray Director

ii) Information Meetings, Public Hearings and Submissions

a) Information Meetings

To ensure a maximum degree of public awareness concerning the hearing process and to disseminate information to local groups and individuals, information meetings were conducted. These meetings, normally sponsored by a local community association, were held in rural communities on or closely adjacent to all Category "B" rail lines. The Commission's Inquiry Officers attended these meetings to explain the composition and powers of the Commission and to explain the procedures to be adopted for later public hearings. Inquiry Officers also used audio visual presentations to provide audiences with a background to the problems which led to the establishment of the Commission. The three prairie provincial governments contributed significantly to public participation in these meetings.

b) Public Hearings

Four types of public hearings were held, viz: Global

Hearings, Local Hearings, Regional Hearings and Final Public Hearings.

(1) Global Hearings:

Global hearings were held to enable the railway companies, the grain companies, the provincial governments, farm organizations, labour organizations, municipal government associations, and provincial or interprovincial groups to put forth their positions and recommendations for an improved transportation and grain handling system on the prairies. Hearings were originally scheduled for Saskatoon, Regina, Winnipeg, Edmonton and Calgary; however, with an overwhelming response from the public, the Commission extended the hearings to include two sessions at Saskatoon and Regina. The Global Hearings ran from October 15th to November 26th, 1975, lasting for 25 sitting days during which time 37 briefs were received.

(2) Local Hearings:

Local hearings were held at 77 centres across the three prairie provinces between January 5th and April 20th, 1976. The object of the local hearings in rural prairie communities was to provide local citizens and groups the opportunity to present briefs, to outline their concerns, views and aspirations to the Commission, and suggestions for improvements to the grain handling and transportation system. Hearings ranged from one to

three days with the Commission sitting a total of 90 days and hearing a total of 1,180 submissions. Local hearings were conducted with at least two Commissioners in attendance at the following places:

Waskada	Oakburn	Rockglen
Waldheim	Cremona	Vauxhall
Reston	Wishart	Glentworth
St. Walburg	Benalto	Arrowwood
Kenton	Lake Lenore	Kipling
Lloydminster	Drumheller	Schuler
Hamiota	Hanna	Pilot Mound
Blaine Lake	Wakaw	Fisher Branch
Medstead	Donalda	Empress
Radville	Big Valley	Arborg
St. Paul	Central Butte	Teulon
Bonnyville	Emerson	Iddesleigh
Smoky Lake	Biggar	Strathmore
Athabasca	Struan	Consort
Clyde	Carman	Kyle
Barrhead	Somerset	Doddsland
Golden Prairie	Kerrobert	Lucky Lake
Swift Current	Minto	Acadia Valley
Shamrock	Naicam	Eston
Mossbank	Neepawa	Kelvington
Dauphin	Portage	Jedburgh
Swan River	Assiniboia	Rhein
Norquay	Avonlea	Vegreville
Porcupine Plain	Alida	Lewvan
Zenon Park	Cardston	Stoughton

(3) Regional Hearings

Regional Hearings were held at 14 locations as follows across the prairies, with the full Commission in attendance:

Fairview, Alberta	Moose Jaw, Saskatchewan
Brandon, Manitoba	Liberty, Saskatchewan
Weyburn, Saskatchewan	Stettler, Alberta
Lewvan, Saskatchewan	Neepawa, Manitoba
Stoughton, Saskatchewan	Somerset, Manitoba
Stonewall, Manitoba	Yorkton, Saskatchewan
Gravelbourg, Saskatchewan	Melfort, Saskatchewan

During these hearings, the Commission sat for 27 days and heard 111 submissions. Regional Hearings were held to examine the transportation and grain handling systems of a specific area as a unit. Many of these hearings explored the feasibility of alternative rail configurations and the impact on the region and beyond. These hearings enabled the Commission and participants to examine the rationalization of railway lines on a broader scale and the impact on larger areas than was possible at local hearings.

(d) Final Hearings:

Major final hearings were held at Saskatoon, Edmonton, and Vancouver. Hearings ran from August 30th to September 15th, 1976, at Saskatoon where 41 submissions were presented. At Edmonton, nine submissions were made in the hearing which took place September 20th to 23rd, 1976. A hearing at Vancouver heard submissions from 30 groups during a five day sitting which took place between October 4th and 8th, 1976. The final hearing at Saskatoon was conducted to explore fully the concept of structuring and maintaining the most efficient system for transporting grain and other commodities in Western Canada as part of a rationalized railway configuration to serve the needs of the area to the year 2000. Final submissions were received from the railways, grain companies, provincial

governments, municipal associations, labour and farm organizations.

At Edmonton, the hearing dealt primarily with the Alberta Government proposal for a North West Alberta Railway Authority. The railways and other participants dealt specifically with the merits of this proposal. At Vancouver, the Commission received 30 submissions dealing with the transportation and handling of grain and other commodities at and through the West Coast Ports.

CHAPTER 2

THE FIRST CENTURY

THE FIRST CENTURY

An historical examination of grain handling and transportation in Canada reveals that this segment of Canadian agriculture has always been a "current" problem. The persistent issues can be categorized into two broad groups: organization of the grain handling and transportation system and freight rates. Also, this segment of Canadian agriculture has been a favorite subject for Royal Commissions or Special Inquiries. Starting with the 1899 Senkler Royal Commission on the Shipment and Transportation of Grain, and up through the current "Snively" Commission on the Costs of Transporting Grain by Rail and this Commission, there have been 12 major federal Royal Commissions, or inquiries, into the grain industry and grain transportation problems in Canada.

There is a popular tendency to suggest that no progress has been made in the resolution of these issues and that all of these Royal Commissions, and inquiries, have been for naught. In reality, however, as will appear later, there have been significant changes in the grain handling system, but on the transportation side, little change has taken place. Much of the rail network on the Prairies was built 50 to 75 years ago, and, other than the main lines, it has suffered severe deterioration and neglect.

Freight rates on grain established in 1897 have for the most part not been changed since. With the exception of the post war dieselization program of the railways, the recent injection of government

purchased hopper cars, there has been little capital expenditure for the modernization of grain transportation equipment and facilities.

Many recommendations brought forward by Royal Commissions have been adopted by the Federal Government. A notable example is the MacPherson Commission of 1961 which recommended a shift in basic philosophy of transportation policy from one of a high degree of regulation and demand oriented rate making to a policy of deregulation with competition within and among modes as a major "regulator" of rates. A related recommendation was the "user pay" concept under which the user of transportation services was expected to pay the cost of resources used in providing the service; if the user was unable to pay this cost and the service was deemed necessary to the "public interest", the government should then step in and provide any necessary subsidy. This basic philosophy was incorporated in the 1967 National Transportation Act which set out in Section 3 the National Transportation Policy as follows:*

- "3. It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada, and that these objectives are most likely to be achieved when all modes of transport are able to compete under conditions ensuring that having due regard to national policy

* Bill C-33 now before Parliament repeals section 3 and substitutes a new section 3 making substantial changes in the old section 3.

and to legal and constitutional requirements

(a) regulation of all modes of transport will not be of such a nature as to restrict the ability of any mode of transport to compete freely with any other modes of transport;

(b) each mode of transport, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided that mode of transport at public expense;

(c) each mode of transport, so far as practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and

(d) each mode of transport, so far as practicable, carries traffic to or from any point in Canada under tolls and conditions that do not constitute

(i) an unfair disadvantage in respect of any such traffic beyond that disadvantage inherent in the location or volume of the traffic, the scale of operation connected therewith or the type of traffic or service involved, or

(ii) an undue obstacle to the interchange of commodities between points in Canada or unreasonable discouragement to the development of primary or secondary industries or to export trade in or from any region of Canada or to the movement of commodities through Canadian ports;

and this Act is enacted in accordance with and for the attainment of so much of these objectives as fall within the purview of subject-matters under the jurisdiction of Parliament relating to transportation. 1966-67, c. 69, s.1."

Canadian Transport Commission

The National Transportation Act established the Canadian Transport Commission as the regulatory body to implement the changes thus contemplated. A discussion of the successes and failures of the Canadian Transport Commission would be most fascinating, however, that would be

outside the scope of this Commission. It may, however, be said that public opinion in the Prairie Provinces, as expressed at Commission hearings, holds that the Canadian Transport Commission did not fulfill its proper role in regulating CP Rail and Canadian National Railway insofar as maintenance of branch lines in Western Canada is concerned, and in the administration of the subsidies made available for the proper maintenance of these branch lines. The failure to compel the Railways to carry out repairs to bridges and trestles, as they were required to do by the Railway Act was stressed. The CP Rail bridge at Clearwater, Manitoba, and bridges on the CP Rail Alida, Lyleton and Colonsay subdivisions were specific examples brought to the Commission's attention.

A prime example of Canadian Transport Commission indecision and procrastination relates to its discussion with CP Rail relative to the bridge at Clearwater on the Napinka subdivision. This bridge was judged by CP Rail in 1968 to be "unsafe" following high water in the spring of that year. CP Rail have serviced the points on its subdivision from each end of the subdivision since that time.

In 1975, the Napinka subdivision was made a part of the basic network and pursuant to the Prohibition Order #5, abandonment of this subdivision is prohibited before January 1, 2000. On November 26, 1975, the Canadian Transport Commission interpreted the prohibition order as an order to restore operations. At the same time, the Canadian Transport Commission required information on how CP Rail was servicing the line. On March 2, 1976, the Canadian Transport Commission informed CP Rail that they were "assessing the situation". The decision regarding the bridge is therefore in abeyance and the bridge remains out of service.

The Commission views with concern the action of the railway to render service in keeping with the convenience of the carrier rather than service as required by the public and in keeping with the intent of the laws of the land.

There were also complaints that the Canadian Transport Commission indulged in indecision and delays in respect of approval for CP Rail double tracking improvements in the mountain region. Another complaint was about the delay in having the railways abandon the Edmonton-Calgary cross-haul operation. But perhaps the dominant criticism was that the Canadian Transport Commission, being Ottawa based, was unaware of and was not responsive to Western problems and needs.

An Overview

The objective of this chapter is to provide an overview, or setting, for the report. Part I provides an historical perspective of the Prairie grain handling and transportation situation including a sketch of railway construction in Western Canada, establishment of the Crows Nest Pass grain rates, and the evolution of the grain handling system. Part II reviews the work of previous Commissions of Inquiry, specifically the Duff, Turgeon and MacPherson Commissions. Part III describes the present situation, since the MacPherson Report and up to the establishment of this Commission. The chapter concluded with Part IV which is an overview of future transportation requirements, especially for grain, coal, forest and other bulk commodities.

I. HISTORICAL PERSPECTIVE OF THE PRAIRIE GRAIN HANDLING AND TRANSPORTATION SYSTEM

To understand the problems and alternatives being faced by the grain handling and transportation system today, it is necessary to have some understanding of the conditions under which our railways came into being, and how the grain handling system has evolved.

Railway Construction

The Canadian Pacific Railway was conceived in the early years of Confederation, as an instrument for unifying the country. Canada then consisted of New Brunswick, Nova Scotia, Quebec, Ontario and part of Manitoba. Two years later, the Government bought from the Hudson Bay Company the vast and relatively unknown area of the Northwest Territories, the part of Canada that was later to become the present day provinces of Manitoba, Saskatchewan, Alberta, and the Territories.

In 1870, the Prime Minister, Sir John A. Macdonald, for the purpose of securing British Columbia's entry into Confederation, promised a transcontinental railway. Canada, at that time, was not yet four years old, with a population of only three and a half million of which there were about 2,500 across the whole of the Northwest Territories; and here was the Prime Minister promising to construct the greatest of all railways, longer than any line yet built, and almost one thousand miles longer than the first transcontinental railroad - the Union Pacific-Central Pacific - which

the United States, with a population of almost 40 million, had only just managed to complete in 1869. That line was far to the south of the 49th parallel. A second transcontinental line, the Northern Pacific, lying well within 200 miles of the Canadian Boundary was projected, and construction commenced. A transcontinental railway wholly within Canada came to be regarded as indispensable in the National interest.

It was to take fifteen years to build the railway to the Pacific, and in the process did much to fill up the empty spaces on the western plains with settlers and the beginnings of settlements, and joined together the vast land from sea to sea.

After building the Canadian Pacific Railway main line to the Pacific, branch lines were extended quickly in the west to develop traffic for the main line. The territory south of the main line in Manitoba, for example, was adapted to railway construction and settlement, and was quickly consolidated. More extensive lines were run out from Regina, through Saskatoon, to Prince Alberta in 1890; from Calgary to Edmonton in 1891 and from Calgary south to Fort MacLeod in 1892. In the early 1900's, to take advantage of the boom period, lines were rapidly extended north and south of the main line on the prairies.

Canadian transportation policy began to change somewhat, with the completion of the Canadian Pacific Railway line to the Pacific. The change was signalled, in 1888, by the suspension of the monopoly given to the company just seven years earlier, and seems to have been

caused by fears that the rapidly growing Canadian Pacific Railway would not serve the public interest.

The change in policy blossomed into outright regulation when, in 1897, the government insisted on certain rate reductions in response to the Canadian Pacific Railway's request for aid in the construction of the Crows Nest Line. This was the Crows Nest Pass Agreement which reduced freight rates on wheat bound for export through the Lakehead, and on a number of types of westbound freight. The policy of regulation was formalized in 1904 when the Board of Railway Commissioners, now the Canadian Transport Commission, was formed.

The next decade and a half saw a continuation of the policy of encouraging the expansion of rail lines on the one hand, and of regulation on the other. Two new transcontinental railway systems - The Grand Trunk-Grand Trunk Pacific, and the Canadian Northern - were undertaken by private interests with substantial assistance from the Dominion Government.

In 1896, the Canadian Northern Railway was formed, when it acquired a charter granted, in 1889, to the Lake Manitoba Railway and Canal Company, for the construction of a 123 mile line from Gladstone, through Dauphin, to Winnipegosis. Subsequently, through leasing, absorption and new construction, the Canadian Northern had a network of railways connecting and radiating from such centres as Edmonton, Calgary, Moose Jaw, Regina, Saskatoon, North Battleford and Prince Albert. In 1902, the company obtained authority to build a railway from Port Arthur to Montreal. In 1915 the last spike

was driven in the Canadian Northern's transcontinental network. However, the line had been largely sponsored by government, which provided funds by guaranteeing bonds, and both in 1915 and 1916 further government assistance was needed to keep the line afloat.

In 1902, the Grand Trunk Railway sought assistance to develop a transcontinental system. The government eventually agreed to build this from Moncton to Winnipeg and lease it to the Grand Trunk Railway, which would construct the line, known as the Grand Trunk Pacific, from Winnipeg to the Pacific Coast, through Edmonton and Yellowhead Pass, guaranteed by the Dominion Government.

By 1916, these two new transcontinental railways were in serious trouble, and it was realized that the prairie rail system was over-built. This set the stage for the first of several twentieth century Royal Commissions to study Canada's railways.

The Commission, known as Drayton-Acworth, recommended that the Dominion Government take control of the Grand Trunk, Grand Trunk Pacific and Canadian Northern, that ownership of the companies pass to a board of trustees of "The Dominion Railway Company", that three government-owned railways, the Intercolonial, the Prince Edward Island and the Transcontinental, be handed over to the Company; that the Government assume responsibility for the interest on existing securities, and that the board be permanent and self-perpetuating in order to isolate it from politics.

These recommendations were accepted, and in 1919, with the passage of the Canadian National Railways Act, there came into

being what we know today as Canada's second national railway company. The formation of the Canadian National Railway effectively killed any chance of the Canadian Pacific Railway having the monopoly it desired, while at the same time, preserved competition with the privately owned company.

The Canadian National Railway came into being carrying a massive financial burden. By 1935, the company was labouring under \$1,255 million in bonded indebtedness, and \$1,771 million of inherited debt. Unlike the American system where unsuccessful companies were allowed to go into bankruptcy while the physical properties remained without the encumbrance of old and unpaid debts, in Canada the sins of the father were visited upon the child, and the Canadian National Railway was forced to shoulder the debts for which it was not, per se, responsible and which it could never hope to repay. Although some adjustments have been made, Canadian National Railways still carries a long term debt of \$2 billion.

Because the Canadian National Railway was the property of the Canadian people, it was expected to be more responsible than other transportation concerns for the general welfare of the communities it served. As early as 1923, the company was committed to development work, such as immigration and land settlement, from which no immediate financial rewards would accrue and the ultimate benefits of which would help Canada as a whole.

The real struggle, however, was for revenues. By 1928, this had largely localized in the rich agricultural areas of the northwest.

In determining which of the two railways was to blame for branch line duplications, it is essential to bear in mind that the Canadian National Railway had received, as a legacy from the Grand Trunk Pacific and the Canadian Northern, "settlers rights" in the wheat bearing districts of northern Saskatchewan and in the Peace River in Northern Alberta. The territory of the Canadian Pacific Railway lay to the south, and it was only when the northern lands began to produce and bring prosperity to those areas that Canadian Pacific Railways decided seriously to penetrate into a region which was traditionally the property of its rival. A long battle between the two railways resulted in 1929 in the acquisition from the Alberta Government of its northern railway property by both systems, which agreed upon joint operations under the name of Northern Alberta Railway. But elsewhere there was the minimum of co-operation.

On March 29th, 1929, the Hudson Bay road was completed and ultimately, in 1956, given to the Canadian National Railway. No provision was made to carry grain traffic originating on Canadian Pacific lines despite the existence of physical interchanges between the two railways in northeast Saskatchewan.

The economic crisis of 1929 and the ensuing depression brought on the Duff Commission in 1931, which was appointed to:

"... inquire into the sole problem of transportation in Canada, particularly in relation to railways, shipping, and communication facilities therein, having regard to present conditions and the probable future developments of the country..."

While the Commission recognized several roots to the problem, including the depression, competition from highways and the financial burden of the Canadian National Railways, much of the blame was laid on unwarranted competitive expansion by the two rail systems. The Commission did not see a monopoly as being the solution to this problem. Instead, closer regulation of the industry was recommended for its own as well as public interest, as follows:

- 1) "That the Board of Directors of the Canadian National Railway be replaced by a Board of Trustees very similar to that outlined by the previous Commission.
- 2) "That steps be taken to see that the two railways co-operate as much as possible, and that an 'arbitral tribunal' be established to encourage co-operation between the railways."

The Canadian National-Canadian Pacific Act of 1933, the outcome of the 1931 Commission, was designed to stop wasteful competition. It enjoined the railways to enter co-operative agreements, but stopped short of complete amalgamation.

By 1935, the railway mileage had reached a total of 19,285 as shown hereunder:

TABLE II-1				
Rail Miles of Track 1906-1935				
Year	Manitoba	Saskatchewan	Alberta	Total
1906	2,774	1,957	1,235	5,966
1910	3,221	2,932	1,488	7,641
1915	4,498	5,327	3,174	12,999
1920	4,404	6,220	4,474	15,098
1925	4,539	7,056	4,965	16,560
1930	4,410	8,175	5,607	18,192
1935	4,970	8,555	5,760	19,285

In 1965, the Province of Alberta undertook the construction of a line called the Alberta Resources Railway from Hinton, Alberta to Grande Prairie in the Peace River Block. Management and operation of the line was contracted to Canadian National Railways, which commenced operation in 1970.

While this construction was taking place, some abandonments were being made as follows:

TABLE II-2 Branch Line Abandonments 1945 - 1963			
Year	Subdivision	From -- To	Mileage
<u>CANADIAN NATIONAL</u>			
1950	Spondin	Spondin - Hemaruka, Alberta	24.0
1952	Lampman	Goodwater - Blewett, Saskatchewan	22.0
1960	Wakapa	Neelin - Deloraine, Manitoba	62.0
	Oakland	Amaranth - Alonsa, Manitoba	18.0
1963	Central Butte	Grainland - Dunblane, Saskatchewan	25.0
	Victoria Beach	Beaconia - Victoria Beach, Manitoba	23.0
Total Canadian National			183.0
<u>CP RAIL</u>			
1952	Lorraine	Bulwark - Berkinshaw, Alberta	17.2
	Youngstown	Coronation - Youngstown, Alberta	39.5
1954	Whitkow	Redfield - Ravenhead, Saskatchewan	12.2
1960	Reston	Reston, Man. - Wolseley, Sask.	122.2
	Neptune	Tribune - Neptune, Saskatchewan	14.1
1961	McAuley	Kirkella - McAuley, Manitoba	16.8
1962	Snowflake	Snowflake - Windygates, Manitoba	16.2
	Fallison	Snowflake - Fallison, Manitoba	10.1
	Kaleida	Rudyard - Kaleida, Manitoba	6.2
	Lac Du Bonnet	Great Falls - Lac du Bonnet, Manitoba	14.6
	Rosetown	Gunnworth - Rosetown, Saskatchewan	16.9
	Lorraine	Coronation - Bulwark, Alberta	11.5
1963	Rapid City	Rapid City - Minnedosa, Manitoba	13.5
Total CP Rail			311.0
TOTAL ABANDONMENTS 1945 - 1963			494.0

Construction of the Great Slave Lake Railway commenced in 1962 and regular operations began in 1969. The line was built by the Dominion government at a cost of \$75 million with a contribution of \$20 million from Consolidated Mining and Smelting Company, \$15 million of which has been paid to date. The line was given to Canadian National Railways and is operated as an integral part of that system.

Other railway lines were built in Northern Manitoba between 1929 and 1968 to serve mines and industries. These lines were built from public funds and are now part of the Canadian National Railway system serving such centres as Thompson, Flin Flon and Lynn Lake.

Crows Nest Pass Grain Rates

Knowledge of the situation which existed in Western Canada prior to 1897 is necessary for understanding the rate structure for prairie grain and flour which ensued. Most of the development which had occurred in the West by the late 1880's, had been in Manitoba, then the centre of prairie grain production. Before 1883, however, there was no Canadian rail line connecting Manitoba to the East. Grain had to be shipped through St. Vincent, Minnesota, to the Great Lakes. This indirect shipping of grain was very costly.

In 1883, Canadian Pacific Railway completed its line from Winnipeg to Fort William/Port Arthur. It provided a more direct route to the East for grain producers. However, since Canadian Pacific Railway had the only rail line in the region, it was able to exercise a great deal of monopoly power and adopt a value-of-service pricing policy.

Freight rates were set just sufficiently below the rates through St. Vincent to divert the grain to the all-Canadian route. As a result, Canadian Pacific Railway's rates were higher than the actual costs justified.

Between 1886 and the mid-1890's, prairie farmers were able to exert enough pressure on Canadian Pacific Railway to reduce its rates. During this period, freight rates for grain were reduced from 28 cents to 17 cents per hundredweight from Winnipeg to the Lakehead; from 60 cents to 29 cents per hundredweight from Calgary to the Lakehead. By the mid-1890's, rates had decreased considerably although there were still groups which maintained that they were too high.

From a political standpoint, there had been continuing debate during this period, regarding freight rates in Western Canada. In 1897, the Liberals, under Laurier, had just ended their first year in power. The economy of the country was in stagnation, touching the bottom of one of the most severe recessions of that era. The export market was weak and international markets were depressed. Canada faced the loss of preferential status as a supplier of resources to England, and was having difficulty in penetrating the large American market.

Interest in south-eastern British Columbia was expanding. In the middle 1800's, the area was known to be rich in minerals. The production of gold, silver, lead and zinc in the 1880's made Nelson one of the largest towns west of Winnipeg. The transcontinental lines, however, ran north and south of the area. One of the two

United States' lines passing closest to the region, the Great Northern, reached Nelson by branch line in 1895. The penetration of this branch line into an area of Canada, particularly one with such potential, was viewed with alarm as an infringement on Canadian sovereignty.

As it was, the Province of British Columbia and Canadian Pacific Railway both wanted a railway line built into the Kootenays. In 1888, the Crows Nest and Kootenay Lake Railway Company (renamed the British Columbia Southern) was granted a charter to build within British Columbia from Crows Nest to the Kootenays. Canadian Pacific Railway, on the other hand, had been preparing for a line into the Kootenays by acquiring, in 1889, a charter which enabled the establishment of a connection by water and rail between the northern Canadian Pacific Railway line, which ran through Kicking Horse Pass, and the Kootenays, a roundabout and impractical route. In 1892, Canadian Pacific Railway, in anticipation, leased a line from Dunmore to Lethbridge, Alberta. The early 1890's found Canadian Pacific Railway in the process of bargaining with the Federal Government for a subsidy to build the line. Both the Liberals and Conservatives subscribed to the policy of railroad subsidization, but differed on the actual terms of the agreement. In any event, with the amount of government support, well over 50 percent of costs, and the expectation of profit, Canadian Pacific Railway would have been able to build the line with little, if any, of its own funds.

Political pressures in the form of anti-monopoly sentiment were strong among Westerners, and among many non-industrial Easterners,

in the years prior to 1897. Opposition was voiced against the restrictive tariff laws then in effect which, it was felt, maintained higher prices for the industrialists, at the expense of the rest of the nation. In addition, the West had opposed the monopoly power granted the Canadian Pacific Railway by the 1881 Canadian Pacific Railway Act. Despite the growing discontent over rates, the Canadian Pacific Railway increased the Western freight rates in 1883. Western opposition finally succeeded in forcing the Government, on April 18, 1888, to buy back the guarantee of the Company monopoly, thereby allowing the construction of competing provincial and private lines. In 1895, a Commission was appointed to investigate rates, but brought little satisfaction to the West. However, three objectives of the anti-monopolists were realized in 1897: tariff laws were relaxed in May; the Crows Nest Pass Agreement in June cancelled the Canadian Pacific Railway's freedom from Government rate control; and rates on certain important commodity movements were lowered.

The original Crows Nest Pass Agreement was basically a contract between the Government of Canada and Canadian Pacific Railway. It stipulated that, in return for a subsidy to help in the construction of a rail line into the mineral-rich Kootenay region of British Columbia, Canadian Pacific Railway would agree to make several concessions to the Government. The controversial Crows Nest Pass grain freight rates, one of these concessions, were initially only a part of the Agreement.

The cash subsidy from the Federal Government eventually amounted to more than \$3.4 million. Canadian Pacific Railway also received 3,755,733 acres of land from the Government of British Columbia, including lumber and minerals. Of this land, Canadian Pacific Railway transferred 50 thousand acres of coal bearing land to the Dominion Government, under the provisions of Paragraph 15 of the Crows Nest Pass Agreement. In addition, freight rates for grain and flour moving from the West to the Lakehead were reduced in two stages by three cents per hundredweight. The effective rates on September 1, 1899, from Winnipeg became 14 cents per hundredweight; from Regina, 20 cents per hundredweight and from Calgary, 26 cents. While the rates for grain and flour were to be in effect in perpetuity, they were applied for only a little more than seven of the first twenty-six years of the Agreement, as shown in Table II-3.

In 1902 and 1903, Canadian Northern Railway made agreements with the Provincial Governments of Manitoba and Saskatchewan to reduce its rates on all commodities. In order to remain competitive, Canadian Pacific Railway had to reduce its rates below the Crows Nest levels. This continued until 1918. In the interim period, the Board of Railway Commissioners had been established with complete control over all rate levels, except those set by Parliament. In early 1918, both railways applied to the Board for general rate increases. These were granted, except for the rates on grain and flour, which were increased only to the Crows Nest rate level. Later in 1918, the Crows Nest Pass Agreement was suspended, under the

TABLE II-3

Rates on Grain to Fort William-Port Arthur From Selected Points
(In cents per 100 pounds: Crows Nest Pass Rates = 100 in index)

	From Winnipeg		From Regina		From Calgary	
	Cents	Index	Cents	Index	Cents	Index
Before August 1898	17	121.4	23	115.0	29	111.5
August 1, 1898 - August 31, 1899	15½	110.7	21½	107.5	27½	105.8
September 1, 1899 - October 6, 1903	14	100.0	20	100.0	26	100.0
October 7, 1903 - May 31, 1918	10	71.4	18	90.0	24	92.3
June 1, 1918 - August 11, 1918	12	85.7	20	100.0	26	100.0
August 12, 1918 - September 12, 1920	14	100.0	24	120.0	30	115.4
September 13, 1920 - December 31, 1920	19	135.7	32½	162.5	40½	155.8
January 1, 1921 - November 30, 1921	18	128.6	31	155.0	39	150.0
December 1, 1921 - July 5, 1922	17	121.4	29	145.0	36	138.5
July 6, 1922 to date	14	100.0	20	100.0	26	100.0

Source: Adapted from Index Numbers of Railway Freight Rates,
1913 - 1936 (Ottawa, 1938).

War Measures Act, in order to allow railways to increase their rates. This was done so that they would be able to increase the wages they paid their employees in order that threatened strike action could be averted.

For the next four years, freight rates were considerably above the Crows Nest levels. In 1922, however, the Crows Nest rates for grain and flour were restored, and in 1924 the full Crows Nest Pass Agreement came back into effect. Under a literal interpretation of the Agreement, the railway were compelled to apply these rates on only those lines which had been in existence at the time the contract was signed (1897). The rates being applied on newer lines were not subjected to the Agreement. In 1925, Parliament cancelled the Crows Nest Pass rates on all commodities other than grain and flour. Grain and flour rates were made statutory and were to apply to all points on all lines west of Fort William to Fort William. In 1927, the Board of Transport Commissioners made equivalent rates applicable to grain and flour moving to the Pacific Coast ports for export. This provision was extended to the Port of Churchill in 1931. Subsequent alterations to the statutory rates have been confined to extensions in the grain categories covered.

Section 271 of the Railway Act (Chapter R-2, R.S.) now reads as follows:

"... Crows Nest Pass rates

- 1) "Rates on grain and flour moving from any point on any line of railway west of Thunder Bay, over any line of railway now or hereafter constructed by any company that is subject to the jurisdiction of Parliament, shall be governed by the provisions of the agreement made pursuant to Chapter 5 of the Statutes of Canada, 1897.

"... Rates on grain and flour for export through West Coast

- 2) "Rates on grain and flour moving from any point on any line of railway west of Thunder Bay to Vancouver or Prince Rupert for export over any line of railway now or hereafter constructed by any company that is subject to the jurisdiction of Parliament shall be governed by the provisions of paragraph 2 of General Order No. 448 of the Board of Railway Commissioners for Canada dated Friday the 26th day of August 1927.

"... Rates on grain and flour for export through Churchill

- 3) "Rates on grain and flour moving for export from any point west of Thunder Bay or Armstrong to Churchill over any line of railway of any company that is subject to the jurisdiction of Parliament shall be maintained at the level of rates applying on the 31st day of December 1966.

"... Non application of Section 3

- 4) "Notwithstanding section 3, this section is not limited or in any manner affected by any Act of the Parliament of Canada, or by any agreement made or entered into pursuant thereto, whether general in application or special or relating only to any specific railway or railways.
1960-61, c.54, ss 1, 2; 1966-67, c."

Evolution of the Grain Handling System

By the turn of the century, grain production was the dominant business in Western Canada. In 1901, approximately 3.5 million acres had been planted to major crops. The Winnipeg Grain Exchange had been established in 1887, and in 1903, it opened a futures market. During this period, grain marketing took place largely through the Exchange. The primary elevator system had begun to develop, and in 1900, there were 454 elevators with a licensed capacity of 12.8 million bushels. In addition, there were numerous flat warehouses in existence, but few of these were built after 1900.

This period also saw the origin of the producer car concept, which still exists today. This privilege had its root in a dispute involving the owners of the earliest elevators, the owners of flat warehouses, and the railways. As country elevators began to make their appearance in Western Canada, the flat warehouses, which had been the original facilities to accumulate grain for loading to rail cars prior to that, became technically obsolescent. The elevator was a far superior facility to achieve expeditious turn-around of cars, and recognizing this, the railways agreed to supply cars only to the elevator and not to flat warehouses. Both warehousemen and producers protested this situation, with producers' primary concern being that the destruction of competition at these points would force them to deal with elevator syndicates.

The issue raged along with a number of controversies just prior to the turn of the century, and in 1899 the Federal Government appointed a Royal Commission to inquire into producers' complaints. The recommendations of the Royal Commission led to the passage of the Manitoba Grain Act in 1900 which made provision for regulation of the grain trade. In addition it included a clause prohibiting the railways from refusing to provide service to flat warehouses.

Amendments to the Act in 1902 introduced the car order book. Persons wishing to ship grain were required to place an application in the car order book, maintained by the railway agent, and cars had to be distributed in order of application.

The provision of the legislation protecting producers' rights

to obtain cars was breached by Canadian Pacific Railway in 1902, and charges against the railway were laid in the well-known Sinaluta case. The case was carried to the Supreme Court of Canada. Canadian Pacific Railway lost, and a provision permitting producers to order their own car has lived on to this day, but is rarely used. The absence of railway agents at most points has made the order book requirements quite useless.

Country elevators at this time were operated by persons and companies engaged in grain merchandising. The Royal Commission of 1899 pointed out that a standard elevator of 25 thousand bushels would have to handle three times that quantity, at the then current handling tariff of 1.5 cents per bushel to be a profitable venture. Accordingly, the Commission went on to say, the elevator operator can only make a profit when he is also engaged in grain merchandising and "makes a buyers' profit on grain handled by himself in addition to the profit on storing and handling."

The first to engage in construction of elevators were the flour mills with the Ogilvie Milling Company constructing the first elevator in Canada at Gretna in 1881. The Northern Elevator Company was the first of the so-called "line" elevator companies to construct a chain of elevators to act as their own source of supply for grain merchandising.

The important features of the early development of the grain handling system was the close relationship between grain handling and grain merchandising. As producer owned elevator companies came

into existence they too followed this pattern.

The Grain Growers Grain Company was formed in 1906 by a few determined members of an early producer organization - the Territorial Grain Growers Association. The concept of producers entering the grain merchandising business to offer competition to the line elevator companies, was first given effect by these individuals. The Grain Growers Grain Company originally had no physical facilities. However, producers' organizations had brought sufficient pressure on provincial governments for public ownership of elevators that in 1909, the Manitoba Government agreed to construct a chain of facilities. The Government eventually built or acquired 174 elevators, but financially the venture was a failure. Most of the elevators were first leased and eventually sold to the Grain Growers Grain Company. Thus the company acquired the facilities which it needed to put it on an equal footing with the line companies. The Grain Growers Grain Company became United Grain Growers in 1917, when it amalgamated with the Alberta Farmers Co-operative Elevator Company Limited. The situation remained more or less static until the formation of the Alberta Pool in 1923, and Manitoba and Saskatchewan Pools in 1924. The Saskatchewan Pool acquired the assets of Saskatchewan Co-operative Elevator Company. The Manitoba and Alberta Pools built their own facilities.

The story since 1938 has been one of amalgamation so that today there are 19 companies, eight of which are major, actively engaged in operating primary elevators in Western Canada. The history of

these amalgamations is as follows:

<u>ORIGINAL COMPANY</u>	<u>NO. OF ELEVATORS</u>	<u>PURCHASED BY</u>	<u>YEAR</u>
Anderson Grain Company	6	United Grain Growers	1938
Gillespie Grain	N/A	United Grain Growers	1943
Reliance Grain	110	United Grain Growers	1947
Midland and Pacific Grain Company	65	United Grain Growers	1954
Canadian Consolidated Grain Company	129	United Grain Growers	1959
Canadian West Grain	5	United Grain Growers	1961
McCabe Grain	72	United Grain Growers	1968
Reliance Grain	30	Pioneer Grain Company	1947
Western Grain	148	Pioneer Grain Company	1951
Independent Grain Company	29	Pioneer Grain Company	1953
Inter-Ocean Grain	26	Pioneer Grain Company	1972
National Grain	286	Cargill Grain Company	1974
Western Canada Flour Mills	41	Manitoba Pool Elevators	1940
Alberta Pacific and Federal	14	Manitoba Pool Elevators	1943
Reliance Grain Company	20	Manitoba Pool Elevators	1947
Northern Grain Company	29	Alberta Wheat Pool	N/A
Lake of the Woods	99	Manitoba, Saskatchewan and Alberta Pools	1959
Ogilvie Mills	56	Manitoba, Saskatchewan and Alberta Pools	1959
Federal Grain Company	1,092	Manitoba, Saskatchewan and Alberta Pools	1972
Robin Hood Elevator-Moose Jaw	1	Parrish and Heimbecker	1968
Quaker Oats Elevator-Saskatoon	1	Parrish and Heimbecker	1973
Ellison Milling Company	18	Parrish and Heimbecker	1975

-- The Federal Grain, Alberta Pacific and Searle Grain Companies amalgamated in 1967.

In 1976, a new producer organization entered the field, the Weyburn Inland Terminal Elevator Association, which constructed a one million bushel capacity elevator. Two similar facilities are being projected by groups of producers at Rockyford and Champion, Alberta. These plants and the new Cargill plants at Elm Creek and Rosetown are being referred to as Inland Terminals. They are not, in fact, terminals - but are large high-throughput primary elevators licensed as such by the Canadian Grain Commission and are capable of cleaning grain to export standards. The Weyburn plant has a storage capacity of 1.0 million bushels, Rosetown and Elm Creek were constructed with one-half million bushel capacity. "Future inland terminals will be smaller, as a result of rising capital costs" according to Mr. Roger Murray, President of Cargill Grain Company of Canada. He suggests that in the future, 300 thousand bushel capacity plants, including cleaning and loading capability, may become the norm.*

The larger units being constructed by the Manitoba Pool Elevators, Saskatchewan Wheat Pool and Alberta Wheat Pool are in the 140 thousand to 170 thousand bushel capacity range. Saskatchewan Wheat Pool recently opened a twin scale plant at Mossbank of 150 thousand bushel capacity, capable of cleaning 600 bushels per hour. United Grain Growers are now constructing a 370 thousand bushel plant at Dawson Creek, British Columbia.

Capital requirements for the next ten years of the primary

* Roger Murray, President Cargill Grain, Speech to Palliser Wheat Growers Annual Meeting, Saskatoon, January, 1977.

elevator industry are said to be in the neighbourhood of \$500 million. In addition, an added cost has been imposed to convert to metric. It is said to cost \$2,200 per elevator or \$8.0 million for the system.

Origins of a Wheat Board

Suspension of the open market was effected in 1917 and the Board of Grain Supervisors was established to control distribution and the price of Canadian Wheat. This move was necessitated by the centralized buying on behalf of allied Governments which had effectively cornered the market. Prices had risen to unprecedented levels and remained well above \$2.00 for the duration of World War I. By comparison, for the five year period from 1908/09 to 1913/14, prices averaged about \$1.00 per bushel and ranged from about \$0.80 to just over \$1.20.

At the end of the war, the first Wheat Board was established to market the 1919/20 crop. Establishment of the Wheat Board followed, by only ten days, the disbanding of the Board of Grain Supervisors and the re-establishment of futures trading on the Winnipeg Grain Exchange on July 21, 1919.

The Wheat Board was established in response to the centralization and government control of buying which had developed in importing countries intent upon rebuilding their economies following the disruptive effects of the Great War. During 1919/20, when the Board was in existence, prices again ranged over \$2.00, but in 1920/21 and 1921/22, an almost continuous price decline occurred, and wheat sold around

the \$1.00 per bushel mark until the end of the 1923/24 crop year. The high prices of the 1917-20 period became associated with the existence of centralized selling, and farmer organizations pressed for the continuance of the Wheat Board. The Government, however, took a different view and the open market was re-established in 1920.

With the failure to secure the continuance of a Wheat Board, the various farm organizations turned to co-operative price pools. In 1923, the Alberta Co-operative Wheat Producers Ltd. was organized and began acceptaing deliveries. This was followed in 1924 by the formation of the Saskatchewan and Manitoba Pool organizations.

The Canadian Wheat Board

The emergence of the Canadian Wheat Board, and the strategies which attended its development have been among the most important influences on the grain handling and transportation system. The genesis of the Canadian Wheat Board can be traced to the formation of producer co-operatives. Producer dissatisfaction with the daily fluctuations inherent in the open market led to the organization of provincial co-operatives whose objective was to establish price pooling mechanisms. In 1924, these organizations formed the Canadian Co-operative Wheat Producers Limited as a Central Selling Agency, to market wheat delivered to the Pools. Part of the strategy employed by the Agency in price stabilization involved the purchase of wheat from producers in quantities which exceeded market requirements. This practice set a precedent as a mechanism for shielding producers from low prices at harvest time by separating the delivery of grain

(hence receipt of income) by producers from the daily selling price by an initial payment to be followed by a final payment at the end of the crop year. During the 1929-1930 period, this strategy led the Agency into overreaching its financial resources as large crops, combined with falling prices and limited world demand as a result of the 1929 collapse. By 1930, both the Provincial and Federal Governments had stepped in with financial guarantees to back the Agency's pooling arrangements.

By August 1, 1931, the Central Selling Agency closed its selling operations on behalf of the three provincial pools. Thereafter it was used as an agency of the Federal Government to support market prices, and to dispose of the pool carryover from the 1930 crop. Because of the support operations, the agency's holdings mounted from the unsold carryover of 76 million bushels at July 31, 1931 to 214 million bushels in 1935. The large sums of money involved and the demonstrated inability of producer co-operatives to assume financial risks of this magnitude induced the Bennett Government to reconsider its involvement in grain marketing. The result was the passage of the Canadian Wheat Board Act on July 5th, 1935.

While, from the Government's point of view, one of the primary tasks of the Canadian Wheat Board was to dispose of the holdings of the Canadian Co-operative Wheat Producers, there can be no doubt that the legislation encompassed broader objectives:

- 1) "to give producers some income protection through the establishment of a government guaranteed floor price for wheat;

- 2) "to give producers the opportunity to obtain equal prices for their wheat regardless of when they marketed it -- i.e. the opportunity for price pooling."

There was a strong feeling among producers and their organizations, that a Board Marketing System would give Canada a greater lever over world prices by controlling a large part of world wheat supply.

The Canadian Wheat Board's responsibilities and the scope of its activities grew steadily from its inception. By 1945, the marketing functions, which previously rested with the elevator companies, were transferred to the Board. The elevator companies became handling and warehousing operations with revenues accruing on a fee-for-service basis. These developments were viewed with mixed reactions with the co-operatives fully supporting the role of the Canadian Wheat Board and the private trade opposing.

The Elevator System

Post war developments in the grain handling system will be discussed in more detail in the chapter relating to the primary elevator system. However, it should be noted that significant changes have been taking place in the elevator system over the last 50 years. The peak number of elevators - 5,758 - was reached in 1935, when the total system had a capacity of 189.9 million bushels. Today, almost fifty years later, we have 3,964 elevators with a total capacity of 344 million bushels - 31 percent reduction in elevator numbers, but a 78 percent increase in handling capacity.

Peak handling period was in 1971/72 when over one billion bushels of grain moved through 4,383 elevators.

As with the development of the primary elevator system, most of the terminal facilities situated at Thunder Bay, Vancouver, Victoria, Prince Rupert and Churchill were constructed by 1935. The first terminal elevators were built in 1882 at Thunder Bay by Canadian Pacific Railway. By 1903, there were five terminals, all built by either Canadian Pacific Railway or Canadian Northern Railway. They had a storage capacity of 12 million bushels. From 1905 to 1920, with the development of large private and co-operative country elevator companies, many more terminal elevators were constructed. The terminal elevator at Prince Rupert constructed in 1925 now has a capacity of 2.25 million bushels. The terminal elevator at Churchill constructed in 1931 now has a capacity of five million bushels. The first two terminals at Vancouver were built by the Federal Government from 1916 to 1928. The total capacity at Thunder Bay, Churchill, Prince Rupert and Vancouver in 1935 was 118.2 million bushels; in 1976 it was only 122.2 million bushels. West Coast terminal capacity is being expanded through the Canadian Wheat Board incentive program designed to encourage the construction of additional storage of 11 million bushels at Vancouver and three million at Prince Rupert. The Burrard terminal in Vancouver is being rebuilt on the north shore of Burrard Inlet, a location served only by Canadian National Railway but accessible also by British Columbia Railway.

II. PREVIOUS COMMISSIONS OF INQUIRY

Inquiry commissions have played an important role in the transportation policy throughout Canadian history. Commissions have been appointed during each major crisis in the railway industry, its imminent bankruptcy in 1916, severe losses in 1931, rapid rate increases and alleged discrimination and proposed abandonment of branch lines in 1959.

The report of each Commission has marked a turning point in Canadian transportation policy. Prior to 1917, the policy was one of development. Railways were given generous help to get started, but were then left to fend for themselves with a minimum of regulation. The Drayton-Acworth Commission of 1917 marked the start of a period of much more direct involvement of government in the operation of railways. It also marked an increase in regulation. The Duff Commission of 1931/32 resulted in even stricter regulation, and the first attempt to reduce wasteful competition between the railways. The Turgeon Commission of 1948-51 was the first Commission to recommend subsidization. This subsidization was not intended to alleviate any problems of the railways but was based on the policy of reducing regional freight differences. Finally, the MacPherson Commission of 1959-61 marked the first break in the trend toward ever tightening regulation. It also accelerated the increase in subsidization, in this case to reduce the losses claimed by the railways.

Competition has played a very interesting part in the history

of the Canadian transportation system. Competition caused the problems associated with over-expansion in the period 1903 to 1915, and again in the period 1923 to 1929. Despite this, the concepts of a regulated monopoly or a crown corporation were discarded, in order to preserve competition, by both the 1916 and 1931 Commissions. Ironically, the railways never faced effective freight price competition, to any extent, until the post 1950 period, when highway, water, and to some extent air carriers became real alternatives to the railways. By this time the railways were so strictly regulated that they were, to some degree, in an inferior position relative to their competitors.

MacPherson Commission

The major force affecting the railway industry in the 1950's was the ever increasing intermodal competition. This competition came largely from trucks but air transport and water transport (on the improved St. Lawrence system) were also very important. The problem that resulted from this competition was slightly different from the problems of the past.

The Turgeon Commission had been appointed to study the freight rate situation. One of the issues was whether horizontal price increases were equitable. The Commission rejected the concept and urged the railways and Board of Transport Commissioners to make future adjustments more equitably. This advice seems to have been ignored however. Between 1948 and 1961, horizontal rate increases of 157 percent were approved (excluding statutory rates). Ironically, the competitive

environment, in which the railways were now operating, would not allow such increases to be fully implemented. Of the 157 percent increase possible, only an average of 55 percent was introduced. The problem, however, was not the level of increases but the distribution of the increases. The railways, facing competition in only some commodities, and in some regions, were forced to make the most of their rate increases in the remaining commodities, and in the remaining regions. As rates increased, competition increased, and the railways were forced to "...apply larger and larger increases to a smaller and smaller portion of traffic."* Unfortunately, the Prairies and Maritimes not only missed out on the benefits of competition, but in fact were penalized because of it.

In addition to the problems caused by the increasing competition from other modes were those caused by a century of viewing the railways as a tool of national policy.

It was the recognition of these problems which prompted the appointment of the MacPherson Commission. The Terms of Reference were simply:

"to inquire into and report upon the problems relating to railway transportation in Canada and the possibility of removing or alleviating inequities in the freight rate structure."**

The Commission identified increased competition coupled with very strict regulation as the problems besetting the railway industry

* Canada, Royal Commission on Transportation, 1961, p. 7.

** Ibid., p. ii.

of 1960. It was the first to suggest that over-regulation of the industry might not be in the public interest. It recognized that if a commercial enterprise is required by regulation to act in the public interest, responsibility for hardships created by this regulation must be accepted by the nation. The Commissioners state, "... let us reiterate, for those obligations which involve losses imposed upon railways by law, there is an obligation to assist."*

Based on this general principle, the Commission recommended that:

- 1) "The railways be allowed to remove uneconomic passenger service unless the Board feels that no alternative highway exists;
- 2) "Uneconomic branch lines be abandoned over some transitional period (possibly 15 years);
- 3) "\$13 million be made available each year to compensate the railways for losses actually incurred in the operation of lines which the railways are prepared to abandon, but which shall be continued over the transitional period;
- 4) "the government make an annual payment to each railway company equal to the amount by which variable expenses incurred in the movement of grain and grain products exceed revenues arising from this traffic;
- 5) "the government make an annual payment of \$9 million to the C.P.R. and \$7.3 million to the C.N.R. to cover export grain's share of overhead costs;
- 6) "the Maritimes Freight Rates Act be extended to allow subsidized rates for all carriers;
- 7) "the 'bridge' subsidy be abolished;

* Ibid., p. 22.

- 8) "feed freight assistance be made available to all carriers and that it be re-evaluated;
- 9) "the practice of horizontal price increases be abolished and be replaced by a more equitable form of price increase mechanism;
- 10) "the C.N. - C.P. Act be repealed;
- 11) "a Transportation Advisory Council be created; and
- 12) "efforts be made to develop better transportation statistics and that studies of the industry be conducted and published periodically."

Despite the sweeping recommendations made by this Commission, it is evident that they considered it their primary task to develop a comprehensive and consistent national transportation policy. This objective seemed logical because of their belief that:

- 1) "the developmental policy of the past was now obsolete;
- 2) "the virtual monopoly that the railways had enjoyed since very early in their history had been replaced by significant intermodal competition; and
- 3) "strict regulation no longer ensured either optimal resource allocation or equity."

While the MacPherson Commission reported in 1961, the legislation based upon it - The National Transportation Act - was not passed until 1966, and many of its provisions were not in force until 1967 or 1968.

III. THE SITUATION SINCE MACPHERSON

A complicating factor in the evolution of the Prairie Grain Handling and Transportation System has been uncertainty on the part of the railways and the grain companies. The main cause of this

uncertainty was the apparent unwillingness of the Federal Government to follow through on policies and procedures which it had implemented. As indicated earlier, the MacPherson Commission recommended in 1961 that branch line abandonment be allowed; that subsidies be paid to the railways to cover losses on branch lines retained "in the public interest". However, nothing much happened until 1965 when the Federal Government issued a prohibition order protecting all but 1,839 miles of prairie branch lines from abandonment until January 1, 1975. MacPherson's recommendations were incorporated into the National Transportation Act of 1967. The Canadian Transport Commission was provided with detailed procedures for the assessment of branch line abandonment applications and the payment of subsidies. (Railway Act Sections 252 to 259). A rail costing order, R-6313, developed by the Canadian Transport Commission and appealed by CP Rail, was eventually upheld by the Supreme Court of Canada. This costing order has been the basis under which so called branch line subsidies were paid. It failed in its objective. Grain dependent lines were allowed to deteriorate in condition and service. The subsidy was originally intended for the maintenance of branch lines. In reality it became a subsidy on grain on all the 19 thousand miles of railway lines in Western Canada and not just for grain that originated on the 12,000 miles of subsidized lines.

Due to the delay in the passing of the National Transportation Act subsidies had grown to \$110 million by 1967. The National Transportation Act provided for a seven year phase out plan of the 'general subsidies'. The subsidies were to begin with the \$110 million in 1967 and decline

by \$14 million a year until a final payment of \$12 million in 1974. These general subsidies, as they declined, were to be replaced by 'specific subsidies'.

Under Section 252 of the Railway Act, the specific subsidies on branch lines were to cover:

"actual loss" in relation to any branch line which the Railway Companies proposed for abandonment under Section 253-254, or which, under Section 258, it was precluded from applying for abandonment".

Section 252 of The Railway Act reads:

"In this section and sections 253 to 258 'actual loss' in relation to any branch line means the excess of

- a) "the costs incurred by the company in any financial year thereof in the operation of the line and in the movement of traffic originating or terminating on the line, over,
- b) "the revenues of the company for that year from the operation of the line and from the movement of traffic originating or terminating on the line;

'branch line' means a line of railway in Canada of a railway company that is subject to the jurisdiction of Parliament that, relative to a main line within the company's railway system in Canada of which it forms a part, is a subsidiary, secondary, local or feeder line of railway, and includes a part of any such subsidiary, secondary, local or feeder line or railway." 1966-67, c. 69, s. 42.

Section 258 of the Railway Act reads:

- 1) "Notwithstanding anything in section 252 to 257, the Governor in Council may, from time to time, by order,
 - a) "designate branch lines that shall not be abandoned within such periods as the Governor in Council may prescribe; and

- b) "designate areas within which branch lines shall not be abandoned within such periods as the Governor in Council may prescribe;

"and branch lines so designated or within areas so designated shall not be approved for abandonment within the prescribed periods nor shall an application for abandonment of any such line be made to the Commission within the prescribed period.

- 2) "Where a branch line or any segment thereof is being operated after the 22nd day of March, 1967 at an actual loss and the company operating that line or segment thereof is unable to make an application for abandonment under Section 253 by virtue of an order under subsection (1), the company may claim for such loss and the Minister of Finance, on the recommendation of the Commission and in accordance with such regulations as the Governor in Council may make in that regard, may, out of the Consolidated Revenue Fund, cause to be paid to the company an amount not exceeding the actual loss of the company, as determined by the Commission, attributable to the operation of that line or segment in the financial year of the company, or part thereof, for which the actual loss is claimed." 1966-67, c. 69, s. 42.

Specific subsidies were first paid to CP Rail in 1970, and to Canadian National Railway in 1971, and to Northern Alberta Railway from 1967. As indicated in the table below, the railways' claimed losses have risen steadily from \$46.8 million in 1971 to \$120.9 million in 1975. Subsidy payments to date have ranged from \$32.7 million in 1971 to \$82.5 million in 1975.

<p style="text-align: center;">TABLE II-4</p> <p style="text-align: center;">Railway Claimed Losses and Subsidy Payments Under Sections 256 to 258 of the Railway Act (Freight)</p>			
Year	Miles of Track	Claimed Loss	Subsidy Payments to Dec. 31, 1976
1971	8,662	\$ 46.8 million	\$ 32.7 million
1972	11,212	56.1 million	37.8 million
1973	11,949	66.6 million	45.6 million
1974	11,498	103.7 million	75.5 million
1975	12,225	120.9 million	82.5 million
SOURCE: Railway Transport Committee, CTC, Ottawa			

The inclusion of thousands of miles of so-called branch lines in the subsidy applications of Canadian National and CP Rail was never intended as a bona fide intention to abandon, which Section 258 (2) contemplated, but solely to qualify for the subsidy that would be payable under Sections 253 to 258 of The Railway Act, and included some four thousand miles of railway lines that have been protected to the year 2000.

In 1975 \$47.7 million was paid to the railway companies, under the branch line subsidy program, to cover the costs of capital employed by the railways. Of this amount, \$19.5 million was in respect of capital employed "off-line", that is, not in respect of the branch line. Details are shown in Table II-5.

TABLE II-5 Claimed "Category IV" Costs* Branch Line Subsidy Claims 1975			
	On-Line Costs \$	Off-Line Costs	Total
Canadian National	14,240,347	10,539,237	24,779,584
CP Rail	12,058,423	7,896,967	19,955,390
Northern Alberta Railways	1,919,100	1,047,740	2,966,840
TOTAL	28,217,870	19,483,944	47,701,814
* Cost of Capital for road property, diesel units, cars, etc. SOURCE: Canadian Transport Commission 2/24/77			

No part of this \$47.7 million was spent by the railways on maintaining the lines for which the subsidy was paid. This is evidenced by the deplorable condition of thousands of miles of lines, even including some that were placed in the year 2000 category. It is clear that both the Canadian Transport Commission and the Railways considered the subsidy claimed and paid, not as a fund with which to keep the lines in proper repair, but as a commodity subsidy applicable towards the cost of transporting grain and grain products, to export positions. As a Canadian National Railway spokesman said, "We use it (the subsidy) as an essential part of our cash flow." Mr. Burbidge, President of CP Rail stated to the Commission in Regina on October 20, 1975: "The Branch Line Subsidy has become, in reality, a subsidy for moving grain."

The Years 1969 - 1977

In 1969, the Minister responsible for the Canadian Wheat Board established the Grains Group whose objective was to develop policies and arrangements to improve the efficiency of the gathering, transportation, and storage of Canadian grain to ensure its competitiveness in domestic and foreign markets. The Grains Group reports, made public in 1972, documented the problems in Prairie grain handling and transportation, and determined the costs of five alternative rationalization schemes. These reports were turned over to the Canada Grains Council for on going study and evaluation by all components of the industry, but no consensus for rationalization of the system emerged.

At the Western Economic Opportunities Conference at Calgary in 1973, the Federal Government announced that 1,839 miles of prairie branch lines, not previously protected, were "protected" from abandonment until January 1, 1975. In December, 1974, the Minister of Transport announced the Federal Government's designation of the Prairie Rail Network. Following consultation with the railways, a basic network of 12,413 miles of rail lines (64.6 percent of the total) was protected from abandonment until the year 2000. A further 525 miles of lines (2.7 percent of the total) which were no longer in use, were left unprotected and were referred to the Canadian Transport Commission for abandonment decision in 1975. It must be assumed that abandonment orders have been made by this date. The remaining 6,284 miles (32.7 percent of the total) were protected from abandonment for

at least one year to permit further evaluation by the inquiry process. This "freeze" has now been extended until June 30, 1977. In April, 1975, the Government announced the appointment of two Commissions of Inquiry:

- 1) The Commission on the Costs of Transporting Grain by Rail, which issued its first report in October 1976; and
- 2) the Grain Handling and Transportation Commission, whose essential task is to examine, on a regional basis, the economic and social aspects of railway branch lines, and more specifically, all aspects of the grain handling and transportation system in Western Canada, and to make recommendations regarding the future disposition of the 6,284 miles of line mentioned above.

IV. FUTURE TRANSPORTATION REQUIREMENTS

An important element in determining the best grain handling and transportation system for the Prairies is consideration of future transportation requirements for grain and other commodities. The projection of transportation requirements into the future requires insight and analysis into marketing factors influencing world demand for Canadian commodities and our capability to meet these demands. Such analyses are beyond the terms of reference of this Commission, and hence only existing projection studies are summarized. This section presents a brief overview of projected transportation requirements for grain, forest products, coal, potash, sulphur, minerals, and other agricultural products.

Grain

Projections of grain exports have been made to 1985 by the Canadian Wheat Board, Canada Grains Council, and the Saskatchewan Wheat Pool (See Table II-6). Projected available exports range from 690 million bushels to 1,480 million bushels. Average exports for the ten year period 1964-65 to 1973-74 were 566 million bushels, with a high of 798 million bushels in 1972-73.

TABLE II-6 Projected Grain Exports--1985		
	Grain Available for Export	Movements through Pacific Ports
Canadian Wheat Board ¹	1,048-1,480 million ² bushels ²	524-740 million bushels (50%)
Canada Grains Council ³	690 million bushels ²	310 million bushels (45%)
Saskatchewan Wheat Pool ⁴	825 million bushels	412 million bushels (50%)
¹ H. Bjarnason, "Future Volume and Direction of Western Canadian Grain Flow with Particular Attention to the West Coast Ports" presented to Canadian Co-operative Wheat Producers Seminar, Calgary, July 1976. ² Bushels in Barley Equivalent ³ Supply and Demand Projections for Livestock and Feed Grains, Canada, 1985, Canada Grains Council, February 1976. ⁴ G. McGlaughlin, "Storage Requirements for Canadian Grain" presented to Canadian Co-operative Wheat Producers Seminar, Calgary, July 1976.		

Forest Products

A joint Ministry of Transport and Canadian Transport Commission study has reported an uncertainty in Canada's future production projection for lumber due to the downturn in the North American economy. The world demand for wood pulp and newsprint is expected to remain relatively steady with the United States and Japan being the major importers. No changes are anticipated in transportation patterns other than in the Port of Vancouver. This will be dealt with later in the report.

Coal

World demand for both thermal and metallurgical coal will rise sharply in the next decade. British Columbia, Alberta and Saskatchewan are large coal producing provinces. Major new developments in the coal industry are presently on the horizon. Ontario Hydro, the largest single Canadian coal user projects that its needs will rise from 9.2 million tons in 1977 to 11.5 million in 1978, much of it from United States; but as United States supplies dwindle, Ontario Hydro will have to rely on Alberta coal to fill the void. Luscar Limited of Edmonton plans to move two million tons of thermal coal to Thunder Bay in 1978, and expectations are that by early 1980's, this may increase to four million tons and perhaps as high as six million. Canadian National Railways has called for tenders on a major order for cars and diesel locomotives to move Western coal to Ontario. These tenders were placed on behalf of Ontario Hydro. Canadian National

and CP Rail are in the process of entering into an agreement to move 45 million tons from Western Canada to Thunder Bay, during a 15 year period, starting in 1978. A terminal at Thunder Bay is in the course of construction. Coal will also be shipped by rail from Drumheller, Alberta, and Estevan, Saskatchewan in millions of tons. The coal resources in Saskatchewan, as given by the Province, are principally found in the Estevan Basin, estimated to contain one billion short tons; the Willowbunch Basin with almost three billion; the Wood Mountain Basin with one billion; the Cypress Basin with 700 million and the LaRonge Basin with an estimated 36 million. The future potential for the southern basins is 150 million tons to the year 2000, of this 100 million may have to be moved by rail. These movements of coal will tax the capacity of the main Canadian National and CP Rail lines making trans-provincial secondary main lines indispensable.

Potash, Sulphur and other Minerals

The volume of potash and sulphur moved to export markets is expected to increase in the future, imposing an added load on many rail lines. Increases in the movement of other minerals such as sodium sulphate, bentonite, nickel, uranium and others would compete with grain, lumber, potash and sulphur for the rail facilities and capacity available.

Products of Agriculture

Changes in policy, which will expand secondary agriculture

processing on the prairies, will create changes in the requirements for rail equipment from equipment designed for bulk commodity movement to specialized equipment such as refrigerator cars for meat product transport, or pneumatic cars for bulk flour or malt.

CHAPTER 3

THE PRODUCER AND HIS COMMUNITY

1. THE PRODUCER
2. SOCIAL AND COMMUNITY IMPLICATIONS
OF RAILWAY ABANDONMENT

1. THE PRODUCER

The producer is central to the whole grain handling and transportation process. There is no element in the food production-marketing chain which has changed more than the farm production unit. Each producer in his attempt to achieve his individual social and economic goals tries to adjust his production toward this end. In most cases he attempts to maximize his profits while at the same time keeping his risks and his values in mind.

The Farm Unit

Over the past 100 years, the change has been from a labour intensive, largely self-sufficient farm unit where each farm worker produced enough food for himself and three to five other people, to large scale capital intensive units where the farm worker produces enough for himself and fifty other persons. As the cost of farm labour increased and its availability decreased, farmers have very rapidly adopted improved production technology to maintain, and indeed to enhance their individual productive capacity. Naturally with this change in which labour has been replaced with capital in the form of technology, there have been great social repercussions in rural Western Canada. These have visibly manifested themselves in the decline in the farm population and in the number of community centres of service. This trend toward larger production units, although apparently not as marked since 1971 has proceeded at a very rapid rate as evidenced by the following figures.

TABLE III-1						
Farm Size and Farmers -- Western Canada						
Year	Alberta		Saskatchewan		Manitoba	
	No. of Farms	Average Size In Acres	No. of Farms	Average Size in Acres	No. of Farms	Average Size In Acres
1921	82,954	353	119,451	369	53,252	274
1931	97,408	400	136,472	408	54,199	279
1941	99,732	434	138,713	432	58,024	291
1951	84,315	527	112,018	550	52,383	338
1961	73,212	645	93,924	686	43,306	420
1971	62,702	790	76,970	845	34,981	543

Investment

As the nature of the farm changes from one on which labour was the limiting resource of productivity to one wherein capital is the limiting resource, the nature of the restraints and risks naturally change.

Average total investment in Saskatchewan farms in 1975 was estimated at \$136,940.00*. As a comparison, a recent survey of 42 grain farms shows estimated total average investment of \$240,264.00*. The following table shows the relationship of operators to total investment of the 42 farms by soil type:

* Source - Farm Business Summary, 1975
Saskatchewan Agriculture

TABLE III-2

Soil Type	Total Investment		Operators Investment as Percentage of Total Investment	
	Under 1200 acres cult.	1200 & Over acres cult.	Under 1200 acres cult.	1200 & Over acres cult.
Brown	\$160,999 (5 farms)	\$371,843 (5 farms)	98	93
Dark Brown	\$163,489 (8 farms)	\$576,926 (5 farms)	77	52
Black	Under 900 acres cult.	900 & Over acres cult.	Under 900 acres cult.	900 & Over acres cult.
	\$108,533 (14 farms)	\$342,977 (5 farms)	30	52

The very high cost of production units require larger amounts of operating capital. In this environment of larger specialized farms, small profit margins can generate satisfactory farm incomes. At the same time, due to the size of the units, small loss margins can be disastrous. Although great strides have been taken toward the reduction of risks in farm production due to the vagaries of weather and the international market place, the vulnerability of the farmer to elements over which they have no control remains.

It is evident from the 77 local hearings attended by some 15 thousand producers that the mechanics or process of production is well understood by farmers and that they readily adopt new production technology. Farmers are also very cost conscious in the production field because the costs are individual, specific and identifiable.

On the other hand, there appeared to be considerable lack of understanding of the marketing process and the marketing costs, and we can only assume that this is in part because marketing costs are masked and accrue to the system rather than to the individual. Nonetheless, the costs are just as real and can be just as strangulating. Therefore, while the majority of farmers subscribe to the latest production technology for the purpose of lowering their production costs, it was obvious from the hearings that these same farmers prefer their elevators at 'horse-haul' distance. This is not intended as a criticism of farmers, but as a comment on the system.

It was frequently stated at the local hearings: "there could not be much wrong with the grain handling and transportation system when it was able to handle a billion bushels in 1971-72". This may be, but like any other complex system, it does wear out unless properly maintained. The rail system has not been properly maintained and is for many of the grain related lines "worn out". Likewise the primary grain elevator system is wearing out. As these facilities wear out, they are replaced with larger and fewer units capable of handling larger trucks and more bushels per unit of labour, just as farmers replace obsolete tractors with larger units which can do more work per man hour. Both the grain handling and the rail system recently reached a stage where rather drastic renovating programs had to be undertaken. The grain companies, due to a change in legislation, elevator tariffs, improved markets, more aggressive marketing, switched from a storage

oriented program to a throughput program.

The elevator industry has accelerated the consolidation of facilities in the past five years through closure of small inefficient units and construction of larger high throughput units at centralized points.

The railways have been in a state of freeze which has prevented them from doing likewise.

The marketing mechanisms have not paralleled the production technology and unless action is soon taken to update the handling system, we will face the position where we are unable to deliver our increasing production due to an antiquated system. The Commission is concerned about the masking of marketing costs which has the effect of inhibiting the development of better marketing technology. Again, the Commission was impressed with the general knowledge of farmers about their production costs and were also impressed with the fact that many producers making presentations were unable to provide information on the level of their local elevator tariffs or the statutory rate from their own delivery point, let alone other costs and levies such as terminal charges, cleaning charges, drying, Wheat Board costs, etc. It became obvious that greater efforts should be put forth by the grain companies, extension agencies, the Canada Grains Council, Canadian Grain Commission and the Canadian Wheat Board to acquaint these grain producers with marketing processes and costs.

Producer Constraints

As cash outlays for production increase, the farmer has to be cognizant of all costs and, just as larger units and more specialization mean that small margins can mean a profitable operation, adversity in any of the vulnerable areas can also render losses. Farmers are therefore concerned that the transfer of part of the marketing costs from the system in general to themselves as individuals will, or could, significantly affect their economic welfare.

They did throughout the hearings make the case that they oppose long hauling distances because of the costs in cash, energy and time. In essence, they suggested the benefits of cost and time saving technology at home can be wiped out if the time and costs are transferred to grain delivery by unduly long hauls.

The spectre of large through-put elevators, few in number, at some 12 to 15 strategic points on the prairies, involving hauling distances from 50 to 100 miles was raised by opponents of the so called large inland terminals. Having regard to the opposition of producers to hauling distances in excess of 25 miles, producers have no need to fear any developments of this kind and none were proposed. There will be fewer and larger through-put facilities spaced some 25 to 30 miles apart, but no credence need be put on the idea that there will only be a limited number of very large inland facilities.

Regulatory

Throughout the years, producers have sought the development of

institutions and programs which reduce the risks to their enterprise. In the early days of development of commercial agriculture in Western Canada, farmers fought the monopoly of the railways over warehousing, and gained concessions, one of which, the producer car, remains today as a safeguard against discrimination by grain handling companies. They also fought for and obtained the Manitoba Grain Act to ensure grade standards and marketing regulations to protect both farmers and customers. They established their own co-operative grain handling organizations to compete with the private trade and to share in the profits of grain handling. They successfully fought for the establishment of the Canadian Wheat Board.

As concessions were obtained for the benefit and protection of the producer, regulations were also developed to ensure the functioning of the emerging institutions and programs. There are strict regulations in place which, while offering the service farmers required, also in the mind of many producers limit their flexibility and opportunities to take advantage of profitable occasions when they arise.

Programs such as the assigned quota system, off-board feed grain marketing, cash advances on farm stored grain, deferred cash tickets, have been designed to provide an element of flexibility while at the same time allowing producers to subscribe to an orderly marketing system. Terminating quotas have been introduced to enable the Canadian Wheat Board to take advantage of market opportunities and spread farmer deliveries throughout the year. Although terminating quotas have been irregularly applied, no system of delivery penalties or premiums has

been established to ensure compliance. This should be done.

As each program is instituted, the consequences of its application must be taken into consideration. There is no doubt that programs designed for farmers are initiated with good intent, but the resulting regulatory constraints may be counterproductive.

Some suggestions have been made that the way to forestall the proliferation of large so called inland terminals is by restricting the weight load of trucks carrying grain to them. No one doubts the sincerity of those who advocate this. However, it must be recognized that such restrictions may cause greater damage to the marketing system and the economy than to the roads.

As well, adherence to the "too low" handling tariffs may render even the new or renovated elevators uneconomic.

The grain handling and transportation system must enjoy some of the same flexibility for the adoption of new strategy and technology as the farm production sector, otherwise the efforts of producers will be frustrated by a reduced ability to market.

An improved system will require both capital and increased operating revenue. These extra investments and costs will be shared by the farm and non-farm sectors.

Transition Period

To provide equal delivery opportunity in the transition period as lines close, the Canadian Wheat Board should adjust car allocations and grain loading blocks to ensure an equality of opportunity to

producers throughout the grain growing areas.

The increased use of trucks will increase road maintenance costs; abandonment of lines will result in savings to the Federal Treasury of monies heretofore paid to the railways, as Branch Line subsidies. In Chapter 12, the Commission discusses the degree to which the Federal Government should participate in funding these increased road costs.

It is inevitable that additional rationalization of the system must occur even beyond the abandonments recommended in this report. Producers are no doubt fully aware of this.

Each and every change in the system will be at a cost to someone. At the same time, to make no change will continue the disintegration of the system at a high cost to all. The Commission has sought to minimize the transfer of costs of changes to the producer.

The recommendations also suggest a method of cushioning the immediate loss of railway assessment to municipal bodies where lines are abandoned.

The loss of a rail line will not, in all cases, necessarily mean the loss of the elevator. In Chapter 5, the Commission deals with the concept of "off-line" elevators which would be maintained at selected locations at no extra cost to the producer-user.

2. SOCIAL AND COMMUNITY IMPLICATIONS OF RAILWAY ABANDONMENT

The Commission, not only by command but by conviction, was

committed to take the social implications of recommended changes in the railway configuration into account. At every rural and regional hearing, an emotional plea was made for the retention of the rail lines on the basis that they serve as the focal point and vestige of community viability. It was stated repeatedly that the removal of the rail line and therefore the grain elevators would cause the hamlet, the village or the town to die.

The sincerity of the people making these presentations is unchallenged. However, the validity of the suggestions, insofar as the extent of the effect is concerned, is less certain. It appears that there may be a tendency to equate the significance of the railway of 30 to 50 years ago with its significance today.

Because of the vastness of the country and sparseness of population, transportation in Canada is extremely important for both social and economic purposes.

Good transportation is a necessary condition for the development and growth of most industries and businesses. It is essential to the social well-being of Canada's population, particularly in the hinterlands for the movement of people and commodities. In the development of Canada during the late 19th and early 20th century, rail transport served practically all purposes in Western Canada. However, with the advent of the motor car, good roads, trucks, buses and aircraft, the transportation patterns have changed dramatically.

Although the railways continue to render some "people" service for long distance transportation, the aircraft has largely replaced

rail in the five hundred mile plus category. For short run transportation of people, under two hundred miles or so, the bus and private auto have almost entirely replaced the railway. The regular and efficient bus service established in the three provinces has rendered travel by train almost a thing of the past.

In a similar way, rail has ceased to serve as the carrier of mail and express goods to most communities. It has, however, continued to provide the chief mode of movement of heavy bulk commodities over long distances while trucks serve the transport needs for almost all staple goods and a large proportion of other goods of short haul.

Even bulk farm inputs such as fertilizer, fuel, chemicals and equipment are increasingly hauled from regional distribution points by truck. The nature of rail service on the "as and when required" basis for grain shipments, under the block shipping system, is such that it is unable to meet the distribution requirements for these items, while regular train service would exceed transportation requirements. At local hearings, in communities, where there was no regular service, it was often suggested that if rail service was regular it would be utilized by local merchants. At other hearings, where service was regular, it was suggested service on an "as and when required" basis would be more economical and still serve the important grain haul interests well.

Similarly there was a time when such items as bread was transported by train, as were soft drinks, beer, dry goods and groceries. There was no other mechanized mode. Labor for delivery from station to

store was available through the local "dray man". Today, most of the companies supplying staples to even the large communities in Western Canada use trucks. The convenience of one handling from company dock to the retail store is now subscribed to because of good all weather roads, modern dependable trucks and the high cost of additional handling of goods.

The railways have ceased to have any great effect on the social aspects of life in the smaller communities in Western Canada. It was borne out at local hearings that because elevators are located on track, the effects of railways on communities are associated with population and employment more so than by the service they render. In communities of under 100 population, the employment so generated is proportionately significant. In these centres, just as in larger centres, there is an earnest desire to maintain or increase the population, because by so doing, the social viability and economic opportunities are enhanced. Most small communities desire water and sewer services, schools, hospitals, and amenities which can only be obtained if the population warrants. These are worthy goals and the quest for them is understood.

The Commission does not consider it proper for it to suggest what size of community is deserving of rail service, and which is not. The Commission likewise cannot fully measure the effect of a rail presence or removal on the social viability of communities. After 77 local hearings, it has become evident to the Commission that community viability can only be perceived; it cannot be defined.

It is the people and the spirit of the people which gives the community viability, not the railways nor the elevators.

The Commission does not doubt the psychological effect that the removal of the railway will have on many residents. Many of the inhabitants of affected communities will have already experienced the loss of such things as the livery barn, the steam train, the school, or the telephone exchange. Whether we deem the phasing out of these elements of community life to be signs of progress or not, it is a fact that these facilities were the victims of our developing technology and social change, unrelated to rail abandonment.

A practical and superficial examination of factors which have led and continue to lead to a reduction in the size and number of villages and small towns indicates that many of the very items which rural people would be the last to forgo have had the greatest effect.

Rural electrification has no doubt had the most significant positive social impact on rural life. The refrigeration possibilities it created spelled the demise of such important services as the local butcher shop, and the quick freeze locker plant. Due to the ability to keep bread, fresh vegetables and fruits for a longer period, these commodities were purchased in greater quantity, farther from home leading to the closing of local bakeries and stores.

Vastly improved roads since the early 1950's, along with more comfortable and dependable cars and trucks, have enabled people to travel further for goods and services. No one would wish to forgo these developments. Towns being by-passed by modern highways, the

development of regional health centres, and a host of other items have contributed to the phasing out of many smaller centres with their own identities and social patterns. These changes have occurred and will continue to occur, with or without the railway.

Just as the development of larger school units dictated that all former communities would not have a school, and the amalgamation of weekly newspapers also dictated that every community would not have its own newspaper, it is also a fact that all rural communities in Western Canada cannot grow. Many briefs presented at local hearings agreed the railway system in parts of Western Canada was overbuilt. The community patterns followed the railroads. The inference is that our system of communities was also over-built in the light of technological development, and that all could not survive under conditions of larger farm units, mechanization and accompanying decreased rural population. The evolvement of fewer centres rendering a large number of services has taken place only because several smaller centres have decreased in size or disappeared altogether. This took place, not as a part of a planned development, but as a result of many people making individual decisions on where they wished to shop, do business and socialize. This process has speeded up recently as society subscribes to broader educational curricula and therefore larger schools, to more comprehensive and therefore fewer hospitals, to the development of extensive water and sewer systems, and to fewer and larger machinery dealerships. This same trend is happening to the grain elevators. As sophisticated services are required, higher elevator wages and costs

are incurred, and better roads and trucks permit longer hauls, it follows that there will be fewer but larger elevators. For example, in 1966-67, the average grain handled per elevator on the prairies was 164,452 bushels; in 1975-76, it had increased by 34.2 percent to 220,747 bushels. During the hearings, the Commission was informed by elevator companies that to be economically viable, a modern new elevator must handle between 700 thousand and one million bushels in any one crop year. Indications are that the trend toward consolidation of elevators and the decline in their number will continue into the future. Elevators are bound to be further apart and all rural centres which now have elevators will not have them in the future whether the railway is present or not. These developments are not part of a grandiose plan on anybody's behalf. Indeed such planning would be contrary to the principles of many rural people. It is a natural evolution which is taking place in keeping with the adoption of modern technology and social goals. The Saskatchewan Retail Merchants Association has carried out studies and surveys. The Association estimates and deems it desirable that good centres of service will eventually stabilize when centres providing a wide variety of services establish themselves some 40 to 50 miles apart. Their argument is that at this distance, populations will be large enough to offer a full range of services but at the same time close enough to avoid communication hardship.

Early in the century when it was the sole form of mechanized overland transportation, the railway was important to the community for the service it rendered. The same principle must apply today. The

effects of railways on a community must be by virtue of the services rendered, not by the employment they directly provide. In other words, railways and transportation do not serve a purpose on their own. As a service industry, it is performance, not presence, which is of importance to the community. If the system has little or nothing to service, there is no virtue in the retention of the institution.

It has been argued that the removal of the railway automatically spells the doom of a community. Towns on the prairies which have recently come into existence are "bedroom" communities adjacent to urban areas and some industrial towns next to mines, etc. Communities which have not yet attained the status where they are identified as growth centres through the construction of schools, water systems, hospitals, government offices, etc., have very little chance of ever becoming centres of service and the possibilities of their growth in the future are remote with or without a railway. Studies* have been carried out for the purpose of identifying the factors which contribute to the growth and development of communities. Railways are seldom mentioned as a factor.

Surveys carried out in Manitoba and Saskatchewan in which farmers and businessmen in small towns have been interviewed, indicate and anticipate detrimental effects on the business and social life of the community should the railway be removed. The Commission does not

* Olsen & Brown, A Study of the Growth of Selected Service Centres in Saskatchewan. University of Saskatchewan, Research Report 75-03; January, 1975.
Economic Effect of Rationalization on the Grain Handling and Transportation System on Prairie Communities. Underwood, McClelland and Associates, 1972.

doubt the sincerity of this expression of opinion. Although comprehensive studies on the effects of abandonment are scarce, there are some, two of which are referred to above, which suggest the factors that contribute to community stability and growth. The important factors are local leadership, social facilities such as hospitals, schools, etc. In one comprehensive study in Iowa* where actual abandonment had occurred, it was determined in interviews with local leaders that rail abandonment had had little effect upon employment and businesses in those communities. They indicated that most changes occurring in the businesses were not related to rail abandonment.

There is no doubt that the smaller the centre the greater relative effect of the presence of the rail line and the grain elevators on municipal financing. In the very small centre, the three or four employees of the railway and the railway related businesses along with their families also significantly affect the local churches and the curling club, etc. However, the Commission was unable to locate any study which indicated that the viability of a community which was already declining would be saved by the retention of the railway.

The Commission subscribes in full measure to the principle of rural development and the enhancement of employment opportunities in rural Western Canada. The suggestions contained in other parts of this report are aimed at gaining or regaining for Western Canada a larger portion of the secondary processing industries associated with agri-

* A summary of an economic analysis of upgrading branch lines; a study of 71 lines in Iowa. Iowa State University, Ames, Iowa.

culture. This does not mean the retention of every hamlet and village, nor the retention of branch lines which are now or will become redundant. In many of the present villages and towns, the only user of railway services are the grain elevators. The long term projections and plans of the elevator companies contemplate a substantial reduction in the number and locations of elevators by closure of many smaller units due to their obsolescence. When these are phased out, the railway will cease to serve any function.

As stated elsewhere in this report insofar as grain related lines are concerned, it is to a large extent the existence of grain elevators which will determine the railway configuration. The exception is where the economics of this principle are completely out of line. By virtue of location of new larger elevators now built and plans for future elevator construction which have been provided to the Commission, it is evident delivery points will be phased out and subdivisions or parts of subdivisions will become redundant.

The Railway Act - Section 254 (3)

The merits of each line up for consideration, and the communities on them, were weighed by the Commission. The Commission gave full consideration to the requirements of Section 254, subsection 3, of the Railway Act which stipulates items which must be taken into consideration when a railway applies for permission to abandon a line. In this context and in addition, the Commission considered and sought information as to:

- 1) the highway facilities in the area served by the line;

- 2) the distances from stations on the line to alternate stations on other lines;
- 3) alternative modes of transport in the area;
- 4) any seasonal restrictions on such alternative transport;
- 5) any known potential resource development in the area;
- 6) any services planned for the future;
- 7) anticipated changes in the transportation practices of those using or likely to use the line proposed for abandonment;
- 8) the effect of such changes on other lines and other carriers in the area;
- 9) the feasibility of continuing to operate all or part of the branch line by changing the method of operation or by inter-connection with other lines of the company;
- 10) the feasibility of continuing to operate all or part of the branch line either jointly with or as part of the system or another railway company by sale or lease of the line or segments thereof to another railway company, or by the exchange of operating or running rights between companies or otherwise, including, where necessary, the construction of connecting links with the lines of other companies.

These items and more, as indicated in Chapter 11, "An Evaluation Framework" were studied by the Commission as a basis for the recommendation on particular lines.

Where, in the opinion of the Commission, there was reasonable expectation that railway service would be required within the foreseeable future by a community to develop its known resources, the Commission has recognized this requirement.

For this reason, a quick examination of the recommendations for some retained subdivisions versus some recommended for abandonment may appear inconsistent from strictly a grain handling density viewpoint.

Rail is and will continue to be the principal mode of transport for the movement of grain. As a transportation mode and as a service to producers, railways will continue to play an extremely important role in Western Canada. It is as a service to the farm community, not as a community employer, that the railways will render their contribution. Resources spent on the retention of very light density, and in some cases redundant lines, subtract from the resources necessary to render efficient service for Western Canada as a whole.

These findings and principles are the foundation upon which the Commission structured the rationalized grain handling and transportation system required to serve adequately the needs of Western Canada throughout the next quarter century.

CHAPTER 4

A. MODERN CONFIGURATION

A MODERN CONFIGURATION

In Chapter 11, this Commission is recommending the abandonment in stages to the year 1981 of 2,165 miles of grain-related prairie branch lines, as is detailed in Table XII.1. This 2,165 miles includes 534.2 miles which have not been in operation for as much as two years. At the other end of the spectrum, the Commission has found, as is also discussed in Chapter 11, that some 1,813 miles of prairie branch line have characteristics which warrant their retention as part of the basic rail system to the year 2000 and beyond. Continuance, conditioned on need, is the status recommended for the remaining and largest category of light density branch lines amounting in all to 2,344 miles.*

Given these findings, what kind of railway system will serve the needs of the prairie provinces until the year 2000?

It will be a railway system which, like the present one, is composed of main lines and branch lines but with an altered mix of heavy and light density lines; one in which 2,165 miles will have been abandoned by 1981; other lines will be abandoned over the years. It is illogical to believe that all lines not now recommended for abandonment will automatically survive until the year 2000. By the year 2000, to meet the needs of the prairie provinces, the railway network will have been adapted to contemporary and foreseeable conditions and requirements; it will no longer reflect, as it does today, circumstances which have long since disappeared.

Contrary to what was said in the MacPherson report, the development era of railway construction in Canada is not at an end. New construction

* Includes 22 miles of new construction.

will be required.

The magnitude of agricultural development and other resources in the Peace River Block, both in Alberta and British Columbia, will require railway construction and integration in the near future.

The Commission holds that this new construction which must, and will, take place should be under the aegis of Canadian National but separated from the normal commercial operations of that company so as not to distort its budget and financial picture. There should be created a separate development department of Canadian National to undertake the development, the construction and the operation of any development enterprises, particularly in Canada's Northland. This concept is more fully developed later in this chapter.

The Federal Government has in the past participated in northern transport development in such projects as the Hudson Bay Railway and the Great Slave Lake Railway, both of which were incorporated into the Canadian National Railway System. It is currently again participating in northern transport development jointly with the province of British Columbia in the Joint Transportation Development Program-Northern British Columbia, for an extension of the British Columbia Railway and Canadian National to Dease Lake and on to Lower Post within the Yukon Territory; the latter project being covered by an agreement in principle between the Federal Government and the Government of the province of British Columbia. These types of projects of necessity have to be funded by the Federal Government or by

joint Federal-Provincial programs until they become economically viable and integrated into the main Canadian National system for all purposes.

Prairie Rail Authority

As to the remaining two groups of lines, those whose continued operation hinges on demonstrated need (2,344 miles), and those recommended for abandonment (2,165 miles) by the year 1981, our primary interest is to identify the administrative, operational and financial arrangements which will best serve the public interest, i.e., serve it in such a manner as to minimize the difficulties of transition from the network as we have known it to a system designed for contemporary and foreseeable conditions. In our view, it would be appropriate to centre such arrangements in a new entity to be known as the Prairie Rail Authority funded by the Federal Government.

In recommending a new body to address the several issues posed by grain related branch lines, the Commission is not endorsing the concept of automatic survival for all lines not now recommended for abandonment.

The management of these lines should be entrusted to this new administrative body, consisting of three members based in Western Canada and directly accessible to the producers affected by the operation of these lines. This new body, independent of the railways, appointed and funded by the Federal Government would have complete jurisdiction to manage the lines and to keep them in a sufficient

state of repair and in operation for as long as they are needed.

The major function of the Prairie Rail Authority would be to institute tests of fitness for branch line survival and apply these tests without fear or favour over the years ahead. This Commission is not recommending the addition of another permanent branch to the already over-burdened bureaucratic tree. On the contrary, we believe that self-liquidation should be the ultimate goal of the Prairie Rail Authority, as will become apparent in what follows:

-- Organization, Powers, Duties

The Commission believes that the Prairie Rail Authority should be a Federal crown corporation, chartered effective no later than January 1st, 1978, with headquarters in the West. It should be empowered as may be appropriate to carry out the following duties:

- 1) Lease, at a nominal fee, say \$1 per branch line per year, all grain related branch lines now designated as Category "B" which do not become part of the basic rail system;
- 2) Contract with Canadian National and CP Rail to conduct train operation and related functions on these branch lines on a cost reimbursement basis, including a management fee, and subject to such incentives and penalties designed to obtain efficient operations as the Prairie Rail Authority may deem appropriate;
- 3) Contract with Canadian National and CP Rail to perform such roadway maintenance as may be required to conduct safe train operations in accordance with prescribed service standards;
- 4) Contract for the provision of truck service in substitution for rail service after cessation of the latter on branch lines which are abandoned, where an off-line elevator is continued in operation;
- 5) Gather independently and from the railways, data on the physical condition of branch lines subject to its jurisdiction, which is at all times current and complete;

- 6) Determine whether and to what extent rehabilitation of branch lines subject to its jurisdiction is justified, having in mind all known facts and forecasts concerning grain production and shipment on each line, as well as availability of and cost of shipment via alternate lines, in such manner as to secure maximum extension of service life for a minimum expenditure of funds;
- 7) Contract with Canadian National and CP Rail to perform such roadway rehabilitation as may be required in accordance with 6) above.
- 8) Monitor contract performance as to train operation, roadway maintenance and roadway rehabilitation;
- 9) Prescribe standards which will govern the provision of train or truck service on individual branches in a manner responsive to the needs of grain producers. This will entail the exercise of a sophisticated liaison not only with producers and the Canadian Wheat Board, but also with the elevator companies and the railways, so that block loading and frequency of operation are responsive to known and forecast demands for service;
- 10) Authorize, given demonstrated need, a "Basic Network" designation for individual branch lines, or portions thereof, for inclusion in the basic rail system, guaranteed to the year 2000.
- 11) Authorize the abandonment of branch lines lacking a demonstrated need for their continuance; and
- 12) Control elevator sitings along its lines. The purpose here is to preclude an uncontrolled proliferation of elevators along the Prairie Rail Authority lines, which should be operated so as to ensure continued service at present elevators, and otherwise to be responsive to such changes in marketing patterns as may evolve.

It may be desirable to be explicit on certain matters implied by the foregoing. It is our intent that power to sanction abandonment of these branch lines be exclusively vested in Prairie Rail Authority; such power should be, we believe, for this limited purpose transferred from the Canadian Transport Commission. The latter body would, however, in the regime we recommend, continue to exercise its regulatory jurisdiction over rates and charges applicable to commodities other than statutory grain which originate, terminate, or move over, lines regulated and

operated by or for the account of Prairie Rail Authority, pursuant to wheelage agreements with the railways.

Before making an order for abandonment of any line under its jurisdiction, the Prairie Rail Authority will cause a hearing to be held in the locality of the line proposed for abandonment, and, having duly advertised the hearing shall proceed to hear all interested parties. The Committee to hear such applications shall consist of the three members of the Prairie Rail Authority, supplemented by a member appointed by the Province in which the line is situated, plus another member appointed by the Rural Municipality Association of that Province. The Committee shall within 90 days render a decision which shall be final.

Another implicit characteristic of the Prairie Rail Authority is its self-liquidating nature to which we have previously referred. By this, we have reference to the obvious fact that the jurisdiction of Prairie Rail Authority, its work and its deficit (to which we shall come shortly) should all tend to decrease, at first relative to other economic activities, and eventually in absolute terms when, with the passage of time, more and more trackage is either designated for permanent retention or abandonment. It is our intent that an explicit goal of the Authority be to have all lines subject to its management pass from its jurisdiction either to the basic network or through abandonment by the year 1990.

Contracting with Canadian National and/or CP Rail to conduct train operations and related functions, as well as roadway maintenance, would not create labour problems nor difficulties with the railway labour unions.

We recognize that an innovative operating and regulatory pattern such as we advance here is of mere academic interest, unless it meets

the requirements of those whom it is meant to serve. It seems appropriate, therefore, to consider next the posture of the Prairie grain producers, with a railway network adapted to the present and foreseeable conditions, before considering the economic and financial underpinning of the grain gathering system we recommend.

-- Producers

A point we wish to emphasize at the outset is that the changes we propose in the Prairie rail network relate to the manner in which that network is operated, regulated and financed, and in no way to the manner in which individual users of the network conduct their affairs. These changes should, if properly carried out, improve the quality of available grain gathering transportation, eliminate some of the uneconomic aspects of that process as it has heretofore been conducted, and have a salutary effect on Canada's grain marketing efforts in a highly competitive world market. We stipulate that there will be no adverse impact on the individual grain farmer, since the changes we propose do not entail adjustments in the present freight rate groupings, elevator locations, points of grain delivery or marketing patterns generally. Applicable statutory freight rates will apply, as they do now, on grain forwarded from the primary elevator locations currently used. Present rate relationships between different producing areas will remain undisturbed.

It is important to stress that Prairie Rail Authority will sponsor contract operation for its account, of truck-substitute service in areas where rail branch lines are abandoned, and off-line

elevators continue in operation. This will have no effect on individual producers. They will bring their grain to the elevator which enjoys their custom today. Upon abandonment that facility would, if viable, become an off-line elevator, from which grain would be forwarded by Prairie Rail Authority contract truck to an alternate location - presumably the nearest main or branch line point with continuing rail service.

-- Operating Economics

As we use the term here, operating economics includes income derived from the branch lines, offset against the costs of servicing them. By the Commission's formulation, Prairie Rail Authority income collected will consist of elevator or land rentals, wheelage on its non-grain traffic and that share of revenue, if any earned from statutory grain traffic originating on its lines, which exceeds the revenue derived by application of statutory rates to the nearest basic network junction point. All revenue accruals in those cases where the same rate applies to the movement of statutory grain both from its actual origin station and from the nearest basic network rail point will be for the account of the railways which, it should be stressed, would receive identical or substantially similar revenue in the event the branch line were to be discontinued.

The principal elements of operating expense to be experienced by the Prairie Rail Authority are its contractual obligations to defray the cost of roadway maintenance and train operation or substitute truck service from off-line elevators.

The Commission on the Costs of Transporting Grain by Rail found that normalized line related costs in 1974 aggregated \$20.9 million and \$31.7 million respectively for 3,355.1 miles of Canadian National and 3,771.8 miles of CP Rail grain dependent branch lines. Assembled data does not lend to computation of branch line train operating costs corresponding to the line related cost figures cited above, but a system-wide comparison, set out on the following page, indicates that the ratio of train operation expense, including overhead, to road maintenance, property taxes and related overhead was 1.44 for Canadian National and 1.92 for CP Rail. Roadway maintenance, property taxes and overhead of the grain-related Prairie branch lines in 1974 was \$12.2 million on Canadian National and \$14.7 million on CP Rail. By application of the above ratios, it is estimated that grain related branch line train operation expenses would approximate \$17.6 million and \$28.2 million on Canadian National and CP Rail respectively. Thus, an order of magnitude estimate of normalized line related costs plus train operating expenses for grain dependent branch lines approximates \$38.5 million for Canadian National and \$59.9 million for CP Rail*. As detailed in Chapter 12, the Commission is recommending that 1,451.5 miles of Canadian National line and 892.1 miles of CP Rail line be transferred to the Prairie Rail Authority. The roadway and train operating costs calculated on a mileage ratio basis for these lines would total \$30.9 million.

* These figures exclude all elements of freight car costs and depreciation, which are conventionally designated as operating expenses.

TABLE IV-1

Ratio of Train to Roadway Expense
For Class I Railways of Canada
1974

Roadway Expense	CNR	CP Rail
	..... (000)	
Total Road Maintenance	\$ 248,257	\$ 130,389
Plus: Total Provincial Municipal and Special Taxes	36,384	26,892
Less: Quebec and Ontario Income and Quebec Pension	1,757	4,364
Total Road Maintenance and Taxes	\$ 282,884	\$ 152,917
<u>Train Expense</u>		
Locomotive Repair and Depreciation (311A,331)	\$ 74,994	\$ 71,208
Equipment Overhead*	11,183	11,258
Dispatching (372)	14,792	9,706
Enginemen and Trainmen (392,401)	115,501	70,702
Fuel (394)	71,420	54,154
Supplies (398)	4,449	4,291
Enginehouse (400)	16,448	11,229
Train Other (402)	56,174	38,206
Signal Operation (404)	670	446
Communication (407)	12,244	3,530
Transportation Overhead**	29,170	19,226
Total Train Expenses	\$407,045	\$293,956
Ratio of Train Expenses to Road Maintenance and Taxes	1.44	1.92
* Estimated at 20 percent of account 311A		
** Estimated at 10 percent of the sum of Accounts 372, 394, 398, 400, 401, 402, 404 and 407		
Source: CNR and CPR <u>Annual Reports</u> to Canadian Transport Commission 1974		

It is apparent without detailed analytical treatment that the Prairie Rail Authority share of freight revenue* under the operational and regulatory arrangements we believe to best serve the broad public interest, will constitute a substantial shortfall from the Authority's operating cost, even if allowance is made for a generous margin of error in our assumption of a constant ratio, system and branch, between Road Maintenance and Property Taxes on the one hand and Train operations on the other. Thus, the Prairie Rail Authority would inherit, as we see it, a situation which has existed for some years. When, after World War II, it became apparent to the railways that grain-related branch lines were deficit operations, the carriers were nonetheless required to continue their operation in discharge of their common carrier obligations, and in furtherance of an embedded policy that the economic well-being of the nation would take precedence over the commercial viability of individual lines or services. However, the National Transportation Act of 1967 relieved the railways of this burden in accordance with its philosophy that "each mode of transport, so far as is practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty."** By the provisions of that statute, the railways were to be reimbursed in full for approved costs incurred in branch line operation, and pursuant to it, they had

* In 1974, statutory grain amounted to 91.9 and 89.5 percent of the respective tonnage totals on grain-related branch lines of Canadian National and CP Rail, generating total freight revenues of \$42, \$46, and \$1.3 million for Canadian National, CP Rail and NAR, respectively. Commission on the Costs of Transporting Grain by Rail, Report, Volume I, Appendices F and H.

** 14-15-16 Elizabeth II, Chap. 69(1)(c).

received, as of December 31, 1976, the following subsidy payments in respect of the calendar years indicated.

	Section 256 Unprotected Lines	Section 258 Protected Lines
1968	--	\$ 903,551
1969	--	897,114
1970	\$ 1,209,908	13,248,382
1971	2,938,716	29,792,179
1972	4,117,550	33,666,504
1973	4,283,670	41,269,213
1974	--	75,521,395
1975	226,434	82,378,981
1976	397,340	80,746,897
	-----	-----
TOTAL	\$13,173,618	\$ 358,424,216

At inception of the Prairie Rail Authority, subsidies to the railways for grain-related branch lines will cease, but the expenditure of resources in excess of revenues will persist, although we anticipate that the excess will be of ever decreasing magnitudes as time passes and will altogether evaporate by the year 1990 when need will have been demonstrated or disproven on all lines entrusted to the Authority's care. In the 12 year life of the Authority, however, a substantial railway mileage, shadowed by unresolved questions of need, must be administered; for this mileage, the gap between cost and revenue must be met if service is to continue.

It is manifest that few, if any, areas of the economy are untouched by subsidies, that subsidies are as old as government and have long

been used as an acceptable mechanism in the National interest. In the present case, the government's purpose should be to ease the transition from old to new practices for the paramount sector of the nation's agriculture, which is by any standard a most worthy policy. Moreover, the recipient of the annual subsidy required to meet branch line operating deficits will in the future be a body dedicated exclusively to the public service and relieved of the commercial standards employed by the corporations it will supersede. Finally, the subsidy recipient will have a limited life, a terminal date and a mandate for self-liquidation. We have no hesitation, therefore, in recommending that the Federal subsidies now authorized by Sections 256 and 258 of the Railway Act be replaced effective January 1, 1978, by a funding mechanism, sustained from general revenues of the Federal government, adequate to sustain the Prairie Rail Authority in discharge of its duties as we have described them.

-- Physical Plant

A major advantage of the Prairie Rail Authority is that it will arrest and correct the long term physical deterioration which has been experienced by the grain-related branch lines. As we have elsewhere noted, the lines over which the Prairie Rail Authority will take jurisdiction are typically not in the best physical condition. Although some lines have had relatively recent work and permit unrestricted train operation, a far larger number of lines require varying degrees of rehabilitation, and are characterized by worn rail, rotted ties,

fouled ballast, inadequate track materials and a complete absence of ditching and therefore permit train operation only at curtailed speeds. These conditions have developed despite the subsidies previously arrayed, because the railways have believed, rightly or wrongly, that the magnitude of approved subsidy payments has been inadequate. They have therefore deferred substantial amounts of normal roadway maintenance which, in turn, has consumed the rail, ties, ballast, etc., already in place at a rate faster than might otherwise have occurred.

In addition to maintenance deferrals, the railways have largely, if not completely, withheld injections of new capital into their grain-related branch line plant, apparently because earnings on new investment were limited by cost of money rates established by the Canadian Transport Commission, without provision for income tax.* Critics of this subsidy system including this Commission concluded that the subsidy mechanism was defective because it provided for disbursement to the general revenues of the railways and failed to earmark funds provided so as to ensure their dedication exclusively to the branch lines.

This entire controversy becomes moot when the arrangements we recommend are instituted. The Prairie Rail Authority will not only have a subsidy to cover the gap between current revenues and costs,

* See CTC Order R-6313, Secs. 3.(3) and 3.(4), pp.434-5. The railways have consistently maintained (1) that CTC cost of money rates are too low by current money market standards, and even if they were higher, (2) the provision precluding an allowance for income tax makes new branch line investment imprudent.

but will also be provided with capital funds to rehabilitate the physical branch lines plant where and as needed. The lingering Prairie suspicion that funds meant to keep the grain-related branch lines functioning were expended on other parts of the railways, or disbursed as dividends, will be at an end.

The Prairie Rail Authority will have, of course, no mandate to operate "gold-plated" railways. On the contrary, and we reiterate, it should manage the funds entrusted to it in such a manner as to correlate roadway expenditure with anticipated road property service lives, balancing on each line quality service for the longest periods possible, with minimal residual values in the road property entrusted to it. In many cases this may mean continued minimal maintenance and low operating speeds.

The service here contemplated would be "as and when required". This involves recognition that service might not in many instances be on a year round basis. Many lines can be adequately serviced by periodically emptying the elevators on the lines at specific times of the year. Co-ordination to achieve the service needed would be required between the elevators, the Canadian Wheat Board and the Prairie Rail Authority. Management skills of the highest order will be required and it will also require the Prairie Rail Authority to address analytically some of the peculiar features of railway accounting, in that the required branch line roadway work, in addition to normal maintenance discussed above, divides into two parts:

- 1) "catch-up" maintenance, and
- 2) rehabilitation

each of which, in part, consists of operating expense, i.e., the current cost of doing business and, in part, is capitalized, i.e. becomes an asset

or a portion of the property used.

That some expenditure on branch line maintenance is conventionally capitalized brings us to considerations of ownership and property title. The lines to be transferred to the Prairie Rail Authority represent assets on the books of the railway corporations which hold title to them. As indicated previously, the Prairie Rail Authority will lease each line from its owner during the period of its jurisdiction. The ramifications of relationships between lessors, lessees and third parties are well settled at law, so considerations of ownership and title have little practical effect until individual lines or parts of lines are transferred from the Prairie Rail Authority to the basic network, or abandoned. In the former case, where the involved property is returned to its former owner, we foresee no problems. Where a Canadian National grain-related branch line becomes a portion of the basic network operated by CP Rail, or vice versa, conventional negotiations for sale and acquisition seem adequate. Where, however, a line is to be abandoned, questions immediately arise such as: Who will then own what remains of the property as it existed on January 1, 1978? Who has title to the elements of value which have been invested in the line of railway while it was managed by the Prairie Rail Authority? These issues could be magnified into controversies far exceeding their significance. We propose to forestall controversy by providing that, upon abandonment, the roadbed - that part of the property abandoned represented by land - vest in the provincial crown for disposition as may be mutually agreed to between the relevant province and municipal authorities.

Canadian National or CP Rail, as the case may be, have entitlement

to recover and remove, with one exception, such of the improvements to the property, rail, ties, other track materials, ballast, etc., as may, in their judgement be warranted. Culverts, the removal of which might alter established drainage patterns, or have other adverse effects, would constitute the sole item of improvements to be left in place if so ordered by the Prairie Rail Authority.

We anticipate some objection that the property disposition formula we have outlined involves some element of expropriation of railway property without compensation to the railway companies. That cannot be a valid objection. Under Sections 106 and 259 of the Railway Act, the railways have a legal obligation to maintain service on all lines until abandonment approval is given. In the case of grain-related branch lines, the railways ask to be relieved of this obligation, taking the position, with which we do not disagree, that they are operating these uneconomic lines at a great loss, even when given the branch line subsidies to which we have referred.

In our view, the railways cannot have it both ways. They cannot secure relief from their financial burdens, as we propose, and yet retain an undiluted title to the property in toto, particularly where, as we also propose, many elements of value in the property ultimately to be abandoned are likely to be, in the interim, enhanced by some degree of rehabilitation involving new investment with public funds. We therefore deem it eminently just and equitable that in return for permanent relief from their legal obligation to continue a losing operation, and of having to restore the abandoned right of way to its former condition, the privilege of being allowed to abandon should be made conditional upon giving up ownership of

the land in the right of way. A substantial portion of this land is quite valueless in any event.

It is pertinent to note here that the Royal Commission on the Natural Resources of Saskatchewan found:

..."As time went on, additional land subsidies were promised to the Canadian Pacific Railway for subsidiary lines, and to other railway companies for other projected lines. By 1905, more than 55,000,000 acres of prairie lands had been so pledged, but only two-thirds of this acreage was earned by actual construction. Well before 1905, the policy of subsidizing railway construction by land grants had been discontinued but the process of selecting these lands so earned, and the after-math of tax exemption, remained for many years to vex the growing communities of the West."

"It should be pointed out that practically the whole burden of providing land for these railway subsidies, not only for the railways within the Prairie Provinces as set up in 1905, but for the railways to the north, as well as for portions of the Canadian Pacific lying in Western Ontario and in British Columbia, fell to the lot of the three Prairie Provinces, chiefly to Saskatchewan."*

There should be no corporate crying over the return of rights of way to the Crown.

* Majority Report, March 12, 1935.

Railways in the Northwest

Western Canada still has a large frontier for development which is becoming increasingly important. As we use our natural resources in the areas of present development, and as our cities and industrial complexes expand, engulfing some of our best agricultural land, and as world population grows, demanding more food production, we have to look at other areas for both food and natural resources. Expansion of agriculture and industry in this last frontier is assured; it is only a matter of time and expediency.

It is important that the groundwork be laid to expedite the development of this great area's potential in agriculture, oil, forestry, coal, iron ore, sulphur, etc. This last agricultural frontier in Canada is perhaps the largest in the entire world. The area for natural resource development is the north west area of Canada, which includes the north one-half of Alberta, the north east of British Columbia, commonly referred to as the British Columbia and Alberta Peace River Block, and the western part of the North West Territories. The area's southern boundary being an east-west line through Edmonton, roughly from the Saskatchewan border to the Rocky Mountains, extends into British Columbia and follows the eastern slope of the Rocky Mountains to the Yukon Territory and is bounded on the north by the Arctic Ocean.

Because of its geographic location and its limited accessibility by land and water, it is virtually an empire unto itself, that must have rail access to the rest of Canada and ocean ports.

This area in Alberta and British Columbia is more than twice the size of the Federal Republic of Germany. The agricultural area extends roughly from the 54th to 60th parallel, and the natural resource area extends beyond this to the Arctic. The Precambrian shield parallels the east side of the Mackenzie river with the Coppermine country to the north east.

The Government of Alberta submitted to this Commission a very imaginative proposal, to establish a North West Rail Authority to support foreseeable economic expansion in the northern part of the Province. This Authority, as Alberta conceives it, would be an entirely autonomous body, independent of Canadian National and CP Rail, empowered to own and operate all railway lines within the province north of Edmonton, or to have others do so on its behalf. The creation of such a regional rail authority would, the Province of Alberta submits, result in significant operating economies, enhance car supply, facilitate the elimination of rate anomalies, enhance resource development and, by implication, improve Alberta's access to world markets.

Specifically, the lines to come within the Authority's compass would include:

- 1) The entire operation of the present Northern Alberta Railways Company (NAR), linking Edmonton with Fort McMurray, Dawson Creek and the Peace River country;
- 2) The Great Slave Lake Railway (GSLR), extending between Roma Junction, Hay River and Pine Point (the latter two locations being in the North West Territories);

- 3) The Alberta Resources Railway (ARR), between Grand Prairie and Swan Landing; and
- 4) Certain northern extremities of Canadian National, namely the Athabasca, Bonnyville, Coronado and Sangudo subdivisions.

These now disparate enterprises should, in the view of the Province of Alberta, be joined together to accomplish the twin purposes of improved service to current railway customers and the provision of adequate capacity for the substantial growth in railway traffic which is foreseen. The Authority would be a partnership of public and private interests; its capital at inception would be the contributed railway lines comprising its constituent parts, now owned by the Provincial Government, Canadian National and CP Rail.

The principal justification for Alberta's proposal lies in its vision of unprecedented economic expansion, which foresees continuation of trends experienced during the last 15 years through to the year 2000. The result of such growth is foreseen to be a four-fold increase in Northern Alberta's railway freight by the latter year, as the following table shows.

TABLE IV-2

NORTH WEST RAIL AUTHORITY TRAFFIC FORECAST

Commodity	Present Tons	Existing and Firmly Committed	Existing, Firmly Committed and Proposed
	.....	(000's)	.....
Bulk Grain	1,052	1,052	1,052*
Oil Sands Development	--	290	799
Sulphur	1,750**	465	1,200
Coal:			
Metallurgical	2,018	5,000	5,000
Thermal	--	--	10,500
Minerals (lead, zinc, iron ore, salt)	580	545	3,220
Forest Products	570	1,010	1,730
Mackenzie Pipeline Support	--	***	1,030
Petroleum Products	428****	N/A	1,700
General Freight	N/A	N/A	700

TOTAL	6,398	8,362	26,931

N/A Not Available

* Conservatively forecast as "no growth" in rail traffic due to increased on-farm consumption or local milling and reduction in export trends, and despite a 40% increase under cultivation.

** Current Sangudo Subdivision production from five gas plants, 1973-75 average. Forecast assumes exhaustion of this reserve before the year 2000, with sulphur tonnages from new sources less than current Sangudo volumes.

*** Assumes no pipeline construction

**** 1974 Northern Alberta Railway petroleum tonnage originated and received from connections.

To service this anticipated rise in the volume of railway traffic, the Province of Alberta projects a need to expend \$230 million, between now and the end of the century, to upgrade existing rail lines of the North West Rail Authority through installation of new ties, heavier rail, improved ballast and new communications, and by replacement of old with new bridges.

This Commission cannot verify these traffic forecasts, but is of the view that the bulk grain estimate is much too conservative.

Within the Authority's territory, The Province of Alberta also anticipates that new railway construction, amounting to as much as 455 route miles, will be required to provide access to new development, principally mineral extraction, and including substantial agricultural components. Depending on which lines actually come into being, the expenditure (at 1976 price levels) will aggregate between \$218 and \$385 million.

The probable expenditure on new and improved railways envisioned by the North West Railway Authority proposal therefore totals between \$448 and \$615 million, significant sums even at currently inflated price levels.

Given the fact that these estimates of expenditure are only estimates, albeit by respected consulting engineers, and given the probability that not all the contemplated new lines will be constructed, it is apparent that our consideration of this concept centers on a prospective expenditure approximating one-half billion dollars.

Alberta emphasized that present and prospective railway capital budgets are inadequate to commit funds of such magnitude to relatively high risk projects within a (relatively) limited geographical area. Where then will the money come from? The submission from the Government of Alberta suggests that interest free Northern Development grants will be available, and it implies that the Province and the Federal Government, as partial owners of the North West Rail Authority, may also expect to be called upon. Canadian National and CP Rail however, as we shall note, were at no pains to offer capital. They do not share Alberta's great expectations, and they have many competing prospective uses for the limited supply of new capital.

We do not view it as an obligation of this Commission to conduct an exhaustive investigation of sources and uses of funds for railway expansion in Northern Alberta. In our opinion, the central issue is whether or not such improvements and additions are, in general, needed. If need is demonstrated and an appropriate administrative mechanism devised, we do not doubt that, in due course, the necessary means will be forthcoming from a variety of prospective beneficiaries. The Great Slave Lake Railway is an example of industry participation.

Whether there will be sufficient traffic to justify all or any major part of Alberta's proposal is the issue to which we now turn. The perils of forecasting far into the future are so well

known as to require little stress here; no respected authority would, for example, on the basis of past experience, have foreseen Alberta's present prosperity at the conclusion of World War II, or even twenty years ago. The random happenings which influence events and trends, cannot yet be captured by even the most sophisticated techniques of extrapolation. It is, therefore, all the more true that enthusiasm, expressed in terms of concrete and steel, is as influential in shaping the course of human events as any fundamental economic and political trends which have penetrated the perceptions of conventional thinking people. In a word, the prophecies that governments make, have, as has been noted elsewhere, a tendency towards self-fulfillment. In the 19th century it was Canada's dream to build a nation by building a railway, and so it did. Seen in that context, Alberta's vision of northern development through railway reorganization is fundamentally appealing to this Commission.

The foregoing should not be construed as in any way intended to disparage Alberta's forecast of northern growth in the Province. This Commission was very favorably impressed with the efforts expended by the Province of Alberta to gather and present an organized body of information on anticipated growth in its northern areas, and with the results of these efforts. We do not underestimate the difficulties of securing a measure of factual information from the plans of a multitude of actual and potential entrepreneurs, each chiefly concerned with protecting his competitive position from premature disclosure of

proprietary intentions. What emerges from Alberta's submission is a certain combination of specificity and the lack thereof, but no lack whatever of activity reflecting confidence in an expanding and expansive future. This Commission believes that the weight of available evidence clearly indicates that many, perhaps most of the plans and prospects for northern development in Alberta, so exhaustively documented in the submission of the Province, will be transmuted to reality over the next generation, though not perhaps in the precise locations, volumes, or character now presented to us. This judgment is reinforced by the confidence exuded by the Provincial Government, a confidence which in itself will engender and foster an attractive climate in which present anticipations may more easily be brought to fruition. In our view, this confidence in the future, in which the Provincial Government so clearly mirrors the hopes and aspirations of the community it serves, will be an important factor in realizing the somewhat exuberant forecasts set out above. Since no one can deny that confidence reduces uncertainty, this Commission is persuaded that, on balance, a very substantial railway traffic increase will occur in Northern and Northwestern Alberta, and that appropriate measures must be taken to provide, in the national as well as provincial interest, for its accommodation.

We next consider the response of the railway companies to the proposal of the Government of Alberta. The most important railway operation in the area, with which we are concerned, is the Northern

Alberta Railway, owned in equal share by Canadian National and CP Rail, and dependent on its parents for car supply, though possessed of its own management and motive power. The submissions of the Northern Alberta Railway were principally concerned with Alberta's separately submitted proposals for certain new grain handling railway lines, viz., between Hines Creek and Fort St. John, and between Spirit River and Dawson Creek. Canadian National and CP Rail speaking for the Northern Alberta Railway took a dim view of these proposals, a matter which we consider elsewhere. Northern Alberta Railway, however, has not addressed itself to the broad-gauged perspective of economic growth, in the long term, with which we are principally concerned with here, nor has it any comment to make in respect of the North West Rail Authority, as to which it has -- "looked to the parent companies to carry the burden of analysis in evaluating the consolidation proposal."

The parent companies undertook to assess Alberta's proposal by an elaborate study of present versus combined direct operating costs of the Northern Alberta Railway, Great Slave Lake Railway, Alberta Resources Railway and Canadian National's Athabasca Subdivision*, in response to a request of this Commission.

* The railways' study differed from the North West Rail Authority as proposed by Alberta, in that it excluded from jurisdiction of the Authority the Bonnyville, Coronado and Sangudo Subdivisions of Canadian National.

On the assumption that all present mileage was retained and that all traffic followed present routings, the joint submission of Canadian National and CP Rail concluded that consolidation would reduce annual direct costs by \$135 thousand (at 1975 price and wage levels), but would not result in rate and service improvements to shippers and consignees in the area. Without reference in detail to the complete submission of the railways, it is apparent that measurement of after-consolidation cost behaviour in any such submission rests on a multitude of assumptions, stated and unstated. Such assumptions inevitably influence, and in fact, together determine the findings of a before and after survey, of the type advanced by the railways.

In the present case, there is abundant reason to believe that the railways have marshalled their figures in such a manner as to minimize the potential advantages of a unified operation in the territory. For example, the savings postulated by the railways' case gave no weight to the elimination of some 29 miles of parallel railway route mileage which could be realized from construction of the contemplated Kerensky-Egremont-Redwater connection of less than one mile in length. Elimination of 29 miles of rail line would result in a saving of approximately \$230 thousand annually, in normalized maintenance costs alone.

By the same token, the railways have assumed post-consolidation:

1. A need for a fourth crew member on trains of the Great Slave Lake Railway, despite the lesser number now employed, an absence of grade crossings and minimal switching on the line, and the precedent of non-uniform crew sizes in their own yard operations;
2. No increase in equipment repair efficiency by reason of transfer to Dunvegan of work now performed at Roma Junction;
3. No increase in efficiency flowing from an expanded scale of operations, e.g. the possibility of using automated data processing for manual methods now employed by Northern Alberta Railway in accounting, record keeping, payroll and purchasing functions;
4. A need for redundant supervision at Hay River;
5. Continued movement of dead Great Slave Lake Railway locomotives needing repair;
6. No savings from more efficient use of roadway maintenance machinery; and
7. No reductions whatsoever in car costs from use, by some traffic, of less circuitous routes.

The foregoing list is by no means exhaustive, but it serves to confirm our view that in the premises, potential benefits from consolidation may well exceed, by a significant margin, the \$135 thousand annual operating savings projected by the railways.

Alberta, by contrast, anticipates through a witness with extensive railroad executive experience, that single management operation by an independent entity would have the potential result of a one-time expense reduction of \$1.037 million, and annual

operating savings thereafter of \$982 thousand. We do not doubt that Alberta is putting its best foot forward by such an estimate, and conclude that the potential savings from unified railway operation in Northern Alberta will probably be on the order of a minimum \$500 thousand per year, given present levels of traffic and scale of operations, with still larger economies to be realized when traffic grows.

Both railways, for somewhat different reasons, took the position that the concept advanced by the Government of Alberta was undesirable. Canadian National questioned whether current cost reductions could be achieved; pointed out what it believed would be relatively limited influence of the proposed Authority on rate and service arrangements, which necessarily have a supra-regional geographic reach; referred to the inherent conflict between Alberta's proposal and consolidation trends elsewhere on the continent, i.e. Con-Rail; rejected the thesis that the transcontinental railways do not now, nor will in the future, have the resources, or the priorities, to meet emerging development needs; referred (without specification) to "other mechanisms available" to attain the same goals; stressed the lack of incentive for its cooperation; expressed its doubt that CP Rail access to an increased share of traffic within the region would benefit shippers and receivers; and voiced its reservations about the advocacy in Alberta's proposal of government roadbed ownership.

CP Rail, on the other hand, submitted that the proposal to establish a North West Rail Authority was beyond the terms of reference of this Commission. It joined with Canadian National to the extent of questioning at length the concept that government acquire ownership of all rail roadbeds in Canada, a concept which it totally opposes for a variety of reasons. CP Rail appeared to welcome the opportunity to share in traffic to or from the Great Slave Lake Railway, but otherwise found little merit in Alberta's concept, which it claimed would reduce, or altogether eliminate, its prospects, after many years of loss, for a commercial recovery from the Northern Alberta Railway.

We must emphatically disagree with the CP Rail opinion that our terms of reference limited this Commission to consideration "of how best to move grain to export positions". Rationalization of the network for grain gathering and movement is, to be sure, at the forefront of our concerns. Grain movement, however, though certainly prominent and controversial, is by no means the only transportation issue which public policy must confront. Our charge, as we construe it, is to consider any and all proposals, whether they are specific or global in scope, which may have an influence for transportation betterment in Western Canada over the years ahead. An evaluation of the North West Rail Authority proposal is clearly pertinent to the discharge of this obligation.

We also find that the other misgivings voiced by the railways, with a single exception, lack merit. The exception relates to the idea that government should own the rail roadbeds throughout Canada. As to that suggestion, CP Rail comments:

"It involves an in-depth examination of concepts beyond the time and scope of this Commission, and cannot be dealt with on the basis of the generalized information presently available to the Commission. We note that the Province of Alberta agrees with this position."

We agree in general, and will discuss the concept no further, except to note that its implications and ramifications are so vast as to seem to warrant explicit consideration on a national scale.*

The other misgivings voiced by the railways are collectively characterized by the philosophy that established institutions are always best equipped without modification, to address new and unique situations as these arise. We do not share that view. Were it valid, Canada would never have emerged from its colonial cocoon. Central to our thinking, by contrast, is an urgent need for institutional change, adequate to address and resolve the transportation needs of a dynamic society. In such a milieu, the Alberta brief commands respect by its documentation of anticipated growth and its concern to provide for a future development which appears to this Commission as inevitable in its generality as it is hazy in its particulars. Accordingly, the Commission finds much of the

* Reference to Chapter 6.

Alberta thesis to be persuasive. Appropriate steps should be taken to foster and encourage the railway infrastructure of the north, as distinct from railways throughout the nation, because it is to the north that Canadian hopes and aspirations are directed.

Since the railway infrastructure of the north is and would be primarily developmental in nature, it should not, in the Commission's view, be measured by the rigorous standards to which Canadian National and CP Rail quite properly must adhere, in the performance of their commercial duties. By the same token, the railway infrastructure of the north should exclude railway segments which have the potential for commercial viability within the time horizon we are addressing.

Having in mind that caveat, we believe it unwise to include the Coronado and Bonnyville Subdivisions among that group of lines which would be defined as developmental by the organizational scheme which we prefer. The Canadian National Coronado Subdivision is endowed with an economic future because of the salt mine at Lindbergh and the presence of the Cold Lake Canadian Forces base on the Bonnyville Subdivision.

Although we are persuaded by Alberta's thesis in general, we do not concur with its argument that enhanced northern development must be entrusted to a new railway organization.

The cadre of a new organization must, in any case, come from the present staff of the Northern Alberta Railway, who are tied

by tradition, practice, and in large part, by the sentimental links arising from initial employment, to Canada's major railways. A new organization should exploit the advantages of such human and commercial connections, while concurrently freeing the developmental railways from the constraints some of them have encountered by virtue of their non-profit status. Furthermore, the difficulties of recruiting experienced managers at arms length from Canadian National and CP Rail seem formidable. Finally, the Commission must give weight to the undeniable fact that all but minimal local traffic on the northern development railways must of necessity be interchanged with Canadian National and CP Rail for, or from, movement beyond Edmonton. To establish an altogether independent management and ownership could create, at inception, an adversary relationship with consequences basically the opposite of those we intend. The experience of the British Columbia Railway, which must rely on Burlington Northern, not on CP Rail or Canadian National, for its peak-period car supply, is instructive. And the northern development railways unlike the British Columbia Railway, will have no foreign connection to alleviate their motive power and equipment needs. We therefore believe that it is realistic and desirable to entrust the task of railway development in Northern Alberta and the Northwest Territories, to one of Canada's two major railways.

Having in mind its stewardship of both the Alberta Resources Railway and the Great Slave Lake Railway, its contribution of two

subdivisions to the proposed entity, and its half ownership of the Northern Alberta Railway, as well as its somewhat more extensive experience elsewhere in the operation of northern development railways, i.e. the Hudson Bay Railway; we find that Canadian National is to be preferred over CP Rail as the organization to be vested with managerial control over the prospective entity.

Selection of Canadian National also avoids delicate and troublesome ownership problems: present ownership may continue undisturbed with Canadian National acting as agent for CP Rail, for the Government of Alberta and for the Federal Government in much the same manner as heretofore, until the interest of CP Rail in Northern Alberta Railway is acquired by Canadian National which we recommend should be done.

Our selection of Canadian National as the best qualified operator is, however, based upon three conditions. The first of these is that Canadian National separate the Sangudo and Athabasca subdivisions from its Mountain Region, and combine them with the Northern Alberta Railway in a major new Northern Development Railways Department, to which it will grant the maximum latitude for independent action permissible under the Canadian National umbrella.

The second condition we find essential to the public interest is the establishment of an open interchange point at Edmonton. At the present time, shippers or receivers are free to choose

either Canadian National or CP Rail to move their rail traffic between points on the Northern Alberta Railway and points beyond Edmonton, and this choice of rates or routes is reflected in applicable tariffs, including agreed charges or contracts, on file with the Canadian Transport Commission. The routing options available to Northern Alberta Railway customers are, however, denied to users of the Great Slave Lake Railway, since Canadian National has elected to reserve itself the longest possible haul on traffic to and from points on that railway, which it has done by declining to permit the publication of through routes and joint rates via Edmonton and the CP Rail on all commodities moving to or from Great Slave Lake Railway points. Optimum development of the North, including its grain growing areas will, as we view it, be enhanced if this restrictive policy is superseded by one which grants equality of rate and routing privileges at all Northern Development Railway points, without exception. In a word, we find that the public interest will benefit by the publication, as to all commodities moving to and from all Northern Development Railway stations, of joint rates and through routes via Edmonton and the CP Rail, in addition to the maintenance of tariffs providing for Canadian National single line hauls.

The third condition modifying our selection of Canadian National reflects our dual concern to foster development of agriculture, especially grain production, in the Peace River Block

on both sides of the Alberta-British Columbia boundary, and to provide a rail gateway to the North, supplementary to Edmonton, to alleviate the line and yard capacity strain which we foresee at that point. Edmonton is, in any event, going to be under increasing pressure to supply yard capacity when the projected coal and other traffic comes on-stream, in the absence of provision for alternatives.

To meet this concern, and in order that maximum transport flexibility may at the earliest possible moment be made available to shippers and receivers, in the Peace River Block, we find that an open interchange should be established at Dawson Creek similar to that which we have found necessary at Edmonton. To give force to this proviso, tariffs should be published forthwith providing joint rates, and through routes, for both grain and other traffic from points on the Northern Alberta Railways and the Great Slave Lake Railway (later Northern Development Railway) to:

- (i) Vancouver via Dawson Creek and the British Columbia Railway; and
- (ii) Prince Rupert via Dawson Creek, the British Columbia Railway, Prince George and the Canadian National.

We are mindful that the Peace River Block, originally opened to development about sixty years ago, has never realized its full potential, and at present constitutes the last large agricultural

frontier in Canada and one of the largest in the world. In Alberta, the Peace River area has about 7,900 farmers cultivating at present about 4.730 million acres, producing about 23 million bushels of grain annually. Nevertheless, it has over six million undeveloped arable acres, primarily in the High Level - Fort Vermilion area, or about twice the amount of all Manitoba land sown to wheat in 1975 with 40 thousand acres of new breaking annually. On the British Columbia side of the Peace River Block, complete soil surveys have not yet been taken, but reconnaissance indicates over 1.2 million acres of good arable land, at least an equal amount of marginal land suitable for grazing and crop production, as well as another 20 million acres of Class 5 and 6 soils suitable for grazing.

If these lands are to be brought to and kept in cultivation, they will require rail access superior to that now available. We would expect the Northern Development Railway to exploit in full the potential capacity of lines placed within its jurisdiction, but, this accomplished, there would remain large portions of the area inordinately distant from good rail service or subject to excessive and costly transport circuitry. To remedy this situation, it would appear that new rail construction will, over time, become appropriate. Maximum benefit can be realized from such construction only if it provides both physical and commercial links to the British Columbia Railway, thus affording an alternative to Edmonton, opening a shorter route to the Port of Vancouver, and providing an alternative to the latter at Prince Rupert. During our hearings

local interests, endorsed by the Government of Alberta, sponsored proposals to construct new rail connections seemingly responsive to the criteria we have enunciated, between Hines Creek and Fort St. John and between Spirit River and Dawson Creek. In a submission to us the Northern Alberta Railway analysed these proposals and found them defective.

For somewhat different reasons we have reached the same conclusion. Our concern is that the lines proposed to us lack the orientation to properly service the area of greatest future development potential; namely, that debouching eastward from High Level to Fort Vermilion and beyond. This clearly foreseeable need may be met by a second proviso of our third condition, namely that a new rail line be constructed from Fort St. John roughly northeastward, to a junction with the Manning Subdivision of the Great Slave Lake Railway, at a point more than one hundred miles closer to the major source of future grain traffic than either Hines Creek or Spirit River. We therefore find that the Northern Development Railway, among its earliest duties, should institute surveys to identify that route which most favourably conforms in general alignment to that here specified, and that construction of such a line should be initiated at the earliest possible time after route identification. It should also, as soon as possible, undertake to construct a line to Valleyview. Valleyview is a town of 1,700 population, 50 miles from the nearest rail delivery point, with some producers hauling as far as 100 miles. It is a greatly expanding agricultural area in which from two to three townships to the south are being opened for homesteading

each year. It is contiguous to a gas field in which vast quantities of sulphur are being accumulated awaiting a means of transportation to outside markets. Only with the coordination, both commercial and physical, which we find essential between the Northern Development Railway and its natural connections, can our third condition satisfy the development potential of the northern frontier which is central to our concerns.

Our adoption of a major part of Alberta's concept for railway development should not be misconstrued as an endorsement of purely provincial aspirations. An accident of geography has also made Alberta the fulcrum of national goals in the present context, centering as these do, on the MacKenzie Corridor springboard to the Canadian North. It would not be too much to say that the Alberta Gateway to the North provides a setting for the national dream in a contemporary context.

The MacKenzie Corridor

When so viewed, it is apparent to us that a grander conception than that proposed by Alberta is needed if national, not merely provincial aspirations, are to be well served. We have in mind the need for an organizational setting to serve as the points of departure for planning, promoting, financing, constructing, operating and administering the great railway which has been found, by a study conducted for the Transportation Development Agency of the Ministry of Transport, by Canalog Logistics, Limited, and Canadian Pacific Consulting Services, Limited, Arctic Oil and Gas By Rail in June, 1976, to be a physically

feasible and economically competitive means for transporting crude oil and liquified natural gas southward from the Arctic. We have intensively reviewed the thirteen volume study of this proposed railway and are most favorably impressed by the breadth of its investigations and the superior quality of its analysis. This \$1.5 million study was funded by Transport Canada. Whereas we did not have available to us the resources necessary to review the study in all of its detail, we see no reason to doubt the validity of its ultimate finding that the transport of Arctic Gas and Oil by Rail is completely feasible from both an engineering and a financial perspective.

In the 110 years since Confederation, the nation has evolved as a narrow ribbon of development hugging the border of the United States; the great land mass to the north, comprising by far the preponderant area of our country, has been peripheral to Canada's concerns. Canadian history justifies the opinion that when means are found to commit our resources and our national spirit in a vital and fundamental penetration of this vast and largely undeveloped territory, it will disclose a veritable cornucopia of heretofore undiscovered attractions, a cornucopia which will give force and effect to the northward dimensions which has engaged the national attention in recent years, and a cornucopia which will provide the basis from which Canada's last frontier may evolve, culturally and commercially, in a manner responsive to contemporary expectations.

We see no better means by which to achieve this fundamental penetration than the Arctic Railway which, like the Canadian Pacific Railway

of the past, is proposed at inception for the attainment of specific, and in one sense, narrow goals. But we believe that the Arctic Railway once constructed will, like the Canadian Pacific, fulfill its historic mission by unlocking reserves of Canadian achievement which will far transcend the specific goals to which the proposal is now directed. Arctic railway projects are not unique to Canada. Russia is now building a 2,600 mile arctic rail line in lieu of the projected oil pipe line from Tyumen to Nakhooka.

In its present concept, the Arctic Railway would provide reliable all-year operations over a 916 mile route, linking Enterprise on the Great Slave Lake Railway with a proposed northern terminal near Inuvik in the Mackenzie Delta. Inuvik could become Canada's Arctic Port, available to service the communities along the coast and the Arctic Islands doing what Archangel now does for the north coast of Siberia.

Unlike prior isolated railways in the Yukon and Alaska, this railway would be physically joined to, and would become an integral part of, the continental railway network. Solid unit trains would operate over this route carrying 150 thousand barrels of crude oil in a 40 hour one way trip. Performance capability would be roughly equal to a 48 inch oil pipeline plus a natural gas pipeline of similar size.

The Commission is not insensitive to the high dollar price required to bring this project to fulfillment, a price now estimated to be in the magnitude of between nine and ten billion dollars, being virtually the same price as the proposed Mackenzie Valley Pipeline. We deem the price commensurate with the benefits we foresee, by no means the least

of which involves engaging the hearts, as well as the resources, of all Canadians in the completion of a great national enterprise. We wish to stress that an opening to the north cannot, and will not, depend exclusively on a single mode. Other forms of transportation, highway, waterway, pipeline and air, all will have a role to play in bringing about an effective northern transport system. Our belief is simply that the railway mode is to be preferred as the central facility in a burgeoning development because of its potential for carrying a variety of traffic in both directions and because it lends itself to a minimal and controlled impact on the environment, providing continuous employment in skilled and unskilled categories. It will create a sizeable community at its southern terminus within the Territories.

Given its link to the Great Slave Lake Railway, we see the Arctic Railway as a natural extension to Alberta's proposal for a North West Railway Authority and we therefore recommend, for the reasons already recited, that the ambit of the Northern Development Department encompass not only lines we have already found suitable for ownership and operation by that entity, but the Arctic Railway as well. With such an instrument, difficulties of financing and conflict of interest will be minimized, and costly duplication altogether avoided.

The Commission is not insensitive to the high social responsibility that may be involved in relation to Dene and Inuit land rights and cultures. No project of this kind can be undertaken without the cooperation of the indigenous population following consultations initiated prior to embarking upon actual construction.

The development in the north in which the rights and cultures of native people are respected and fostered can be mutually advantageous to both Canada, as a whole, and the native populations.

The north will change. It is changing now. Development will occur. It is inevitable. It must not, of course, be allowed to occur uncontrolled, but only with the fullest cooperation of the Dene and Inuit. Only in such a milieu will the dream of the North hopefully come to fruition.

CHAPTER 5

PRIMARY ELEVATORS

PRIMARY ELEVATORS

During the hectic period of railway construction on the prairies came a system of buildings designed to receive, store and load grain grown by producers into rail cars. The first facilities were flat wooden warehouses. Producers delivered to them in bags. By 1890, there were 103 of these warehouses across the prairies and by 1900, there were 126. The railways, however, disliked handling grain in bags. As an inducement to switch the grain handling system from bags to bulk, they offered free sites and special privileges to companies to build beside their tracks, elevators capable of receiving, storing and shipping grain in bulk. The first elevator in Western Canada was built at Gretna Manitoba in 1881. It had a storage capacity of 25 thousand bushels. Elevator construction continued at a rapid pace. There were 90 elevators by 1890, 454 by 1900, and 1,860 by 1910. By this time, flat warehouses had all but phased out. Most of the elevators prior to 1900 were owned by individuals, and were of a capacity of 25 thousand bushels.

During the early 1900's, as the railways developed new territory throughout the West, the growth of elevators continued at an exceptionally fast rate. By 1920, there were 166 elevator companies operating in Western Canada, and by 1935 the grain handling system had reached its peak with 5,728 elevators with a storage capacity of 189.9 million bushels. This industry began to consolidate after the war of 1939-45 and consolidation accelerated as operating costs rose in the 1950's and 1960's and as handlings at isolated points continued to decline.

This downward trend in country elevator services is illustrated by the progressive decline in the number of shipping points and primary elevators serving prairie farmers after 1945, but particularly following 1965.

TABLE V-1 DELIVERY POINTS, ELEVATORS AND ELEVATOR CAPACITY 1935-1976			
Year	Delivery Points (No.)	Primary Elevators (No.)	Storage Capacity (millions bushels)
1935	N/A	5,728	189.9
1945	2,113	5,633	287.8
1955	2,083	5,403	334.3
1965	1,983	5,137	381.0
1970	1,907	4,971	399.0
1975	1,556	4,165	355.5
1976	1,495	3,964	343.8

A substantial adjustment in the investment of primary elevators has already taken place by closing some low-volume elevators, by mergers between companies, by eliminating duplications of services and by combining the operation of two or more elevators at one point into a single operating unit under one operator. The 5,403 country elevators at 2,083 delivery points in 1955 were reduced, by 1976, to 3,964 elevators (2,546 "operating units") at 1,495 delivery points. In short, the delivery points were reduced by 28 percent, and the effective elevator "units" providing service were reduced virtually by 53 percent. It may be expected that this consolidation will continue, and be supplemented by construction of larger and more efficient elevators at more strategic locations to serve the farmers.

Yet it should be emphasized that the recent withdrawal of elevator services from nearly 30 percent of the shipping points has not applied just to points on branch lines. These consolidations have applied to the whole primary elevator system covering all rail lines. It may be expected that this universal consolidation will continue. This is because there is a percentage of low volume elevators on basic network rail lines. Thus, it should be expected that the withdrawal of elevator services will continue to be widespread throughout the whole rail system as it has in the past.

Elevator Cost Characteristics

The Commission had two options for obtaining elevator cost information for use in analyzing the implications of alternative rationalization schemes on the elevator system. The first option was to obtain detailed cost information on all or a sample of primary elevators, while the second was to update one of the existing elevator cost studies and generalize to all areas.

A considerable amount of elevator cost information was obtained from grain companies regarding their elevators located on Category "B" rail lines, and this information has been used in analyzing specific branch lines. However, there was considerable variability in cost accounting procedures among grain companies, and information was lacking for elevators located on basic network lines. Rather than engage in the time consuming and costly exercise (for the Commission and the grain companies) of developing a new data base, the decision was made to update an existing elevator cost study. The Canada Grains Council Area 11 elevator costing study was selected for this purpose. This was

one of the most recent elevator costing studies (1972-73); most of the major grain companies were involved in the study, and all of the elevators in the geographic area were included.

Elevator costs were updated to 1974 rather than 1976 in order to make them comparable with the railway costs developed by the Commission on the Costs of Transporting Grain by Rail and farm trucking costs developed by this Commission.

The remainder of this section deals with elevator operating costs and how these costs are influenced by category of rail line, licensed capacity and receipts. The section concludes with some estimates of current elevator construction costs.

Average Elevator Operating Costs

The 1974 average elevator operating costs for 291 manager units in Area 11* are presented in Table V-2, along with the adjustment factors for updating the 1972-73 costs. The average elevator had a licensed capacity of 150,759 bushels and average receipts of 435,448 bushels (1972-73 crop year) for a handling capacity ratio of 2.89. The operating cost per manager unit was \$56,903, or 13.1 cents per bushel. Variable costs, as defined in the Area 11 study, accounted for 59 percent, fixed costs for 24 percent, and administration costs for 17 percent. Labour costs were the largest single cost item - 27 percent of total costs.

Category of Rail Line

Average elevator operating costs are also presented in Table V-2

* Corresponds to Commission Area 11 in West Central Saskatchewan and East Central Alberta.

TABLE V-2
Average Elevator Operating Costs 1974*

	ALL ELEVATORS		ELEVATORS ON BASIC NETWORK		ELEVATORS ON CATEGORY B LINES	
PHYSICAL CHARACTERISTICS						
Number of Elevators	291		161		130	
Average capacity (bushels)	150,759		157,628		142,252	
Average receipts (bushels)						
Crop Year 1972-73	435,448		448,392		419,417	
Handling/capacity ratio	2.89		2.84		2.95	
OPERATING COSTS**						
I. Variable Costs	<u>\$/manager unit</u>	<u>¢/bushel</u>	<u>\$/manager unit</u>	<u>¢/bushel</u>	<u>\$/manager unit</u>	<u>¢/bushel</u>
-- Labour	\$15,514		\$16,287		\$14,557	
-- Interest on current operating capital	11,947		12,304		11,506	
-- Other variable costs	5,903		6,136		5,615	
-- Total Variable costs	<u>\$33,364</u>	7.7	<u>\$34,727</u>	7.7	<u>\$31,678</u>	7.6
II. Fixed Costs						
-- Site Rental, taxes, insurance	4,772		5,372		4,027	
-- Depreciation	4,504		5,506		3,262	
-- Interest on investment	4,071		5,010		2,908	
-- Total fixed costs	<u>\$13,347</u>	3.1	<u>\$15,888</u>	3.5	<u>\$10,197</u>	2.4
III. Administration Costs	10,192	2.3	10,582	2.4	9,710	2.3
IV. TOTAL COSTS	<u>\$56,903</u>	13.1	<u>\$61,197</u>	13.6	<u>\$51,585</u>	12.3

* Based on updated costs from Canada Grains Council Area II Study of 291 manager units in 1972-73. The adjustment factors used by the Canada Grains Council in updating to 1974 were:
labour - 1.146; interest on current operating capital - 1.585; other variable costs - 1.352;
rent, taxes, and insurance - 1.352; depreciation - 1.239; interest on investment - 1.585; and
administration costs - 1.146

** Cost components are defined in CGC Area II Study.

for the 161 manager units located on basic network rail lines and for the 130 manager units on "Category B" rail lines. The licensed capacity of elevators of basic network lines was larger than on "Category B" lines (157,628 bushels vs. 142,252 bushels), but the handling/capacity ratio was greater on "Category B" lines (2.95 vs. 2.84).

Elevator operating costs per manager unit on the basic network were \$61,197 or 13.6 cents per bushel, compared to \$51,585 or 12.3 cents per bushel on "Category B" lines. The major difference is due to higher fixed costs for the elevators on the basic network lines. Variable costs per bushel are almost identical for elevators on both categories of line.

Licensed Capacity

Elevator operating costs and characteristics were stratified according to licensed capacity and category of rail lines (Table V-3). The relationship between average elevator operating costs and elevator receipts (for various licensed capacity levels) is shown in Figure V-1. A number of relationships are evident when we examine this information:

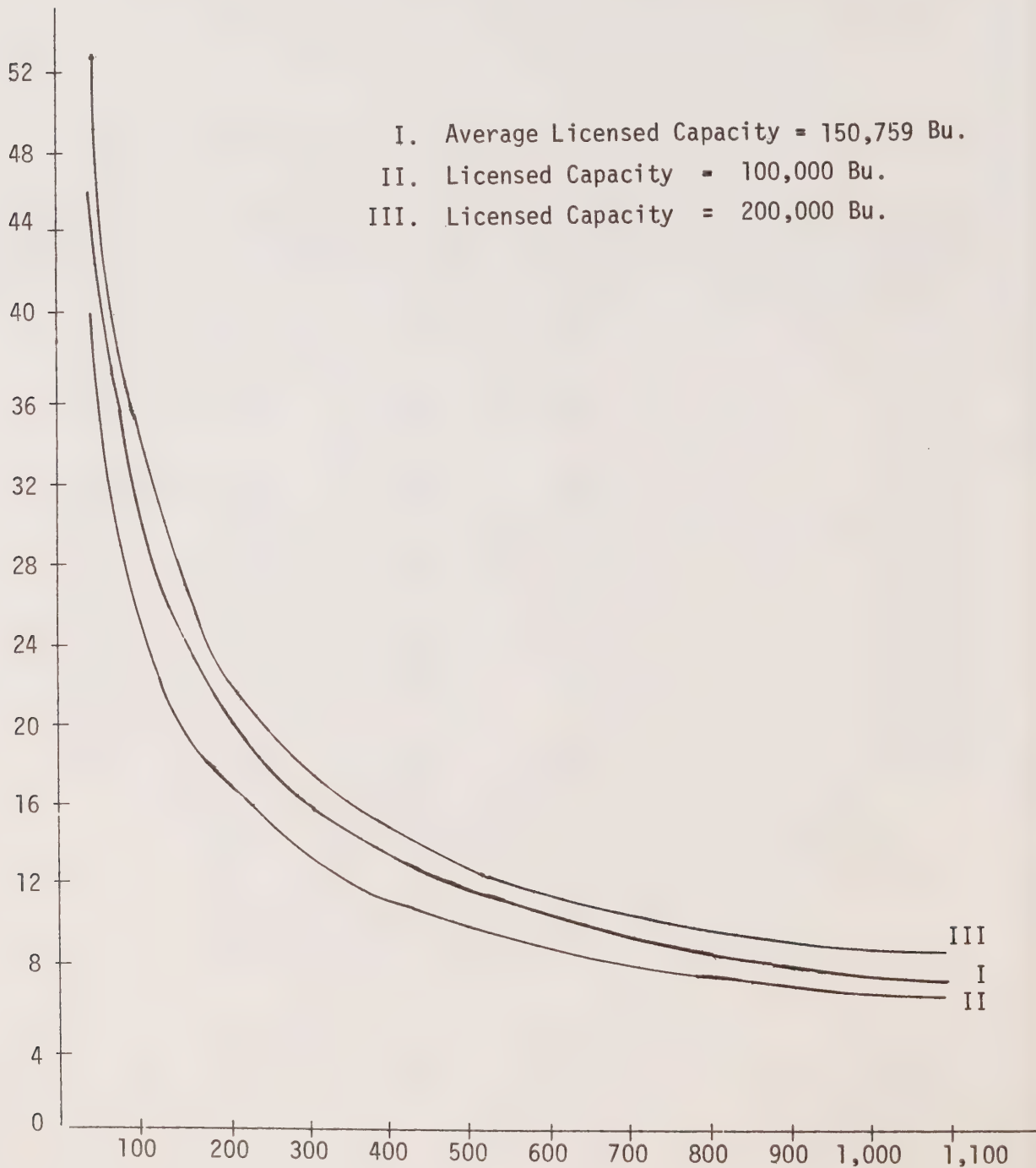
- 1) As licensed capacity increases, costs per manager unit increase, but average cost per bushel decreases. This relationship holds for elevators located on the basic network lines, but not for elevators on "Category B" lines. The explanation for this is that the handling capacity ratio is much larger for smaller elevators on "Category B" lines.
- 2) As licensed capacity increases, the volume of grain handled must also increase if unit costs are to remain the same or decrease. Given the trend towards larger capacity elevators, it is particularly important for the grain company to increase its throughput. For example, if the average receipts of about 450 thousand

TABLE V-3
Average Elevator Operating Costs, 1974, Stratified By Licensed Capacity and Category of Rail Line

Capacity Range (bushels)	No. of Manager Units	Average Capacity (bushels)	Average Receipts 1972-73 (bushels)	Handling/ Capacity Ratio	Average Total Cost/Bushel(Cents)	Total Costs/ Manager Unit
0 - 49,999						
All Elevators	6	38,267	102,049	2.67	21.1	\$ 21,532
Basic Network	3	40,000	67,819	1.70	37.8	25,636
Category B	3	37,667	181,000	4.81	11.4	20,634
50,000 - 99,999						
All Elevators	76	79,083	258,241	3.27	15.6	40,286
Basic Network	37	79,170	240,072	3.03	18.0	43,213
Category B	39	79,000	275,479	3.49	13.4	36,914
100,000 - 149,999						
All Elevators	92	121,394	355,007	2.93	16.1	57,156
Basic Network	53	118,806	339,479	2.86	17.4	59,069
Category B	39	124,910	376,109	3.01	14.4	54,160
150,000 - 199,999						
All Elevators	53	170,955	513,429	3.00	14.5	74,447
Basic Network	30	171,897	507,431	2.95	15.9	80,682
Category B	23	169,726	521,252	3.07	12.7	66,199
200,000 - 249,999						
All Elevators	35	224,666	597,970	2.66	13.7	81,922
Basic Network	20	223,425	602,079	2.69	14.5	87,301
Category B	15	226,320	592,492	2.62	12.6	74,654
250,000 and over						
All elevators	29	332,600	880,732	2.65	13.3	117,137
Basic Network	18	355,928	991,564	2.79	13.2	130,886
Category B	11	284,427	699,371	2.46	13.4	93,716

FIGURE V-1

Relationship Between Average Elevator Operating Costs
and Receipts for Various Levels of Licensed Capacity



bushels were handled by three different sized elevators (100 thousand bushels, 150 thousand bushels and 200 thousand bushels), the average cost per bushel would be approximately 11 cents, 13.5 cents and 15 cents respectively.

Elevator Receipts

Elevator operating costs and characteristics were also stratified according to elevator receipts and category of rail line (Table V-4). A number of important relationships can be seen from Table V-4 and Figure V-1:

- 1) As elevator receipts increase, costs per manager unit increase, but average costs per bushel decrease. This relationship holds for elevators located on both categories of rail lines, except for four elevators on B lines handling more than one million bushels where unit costs increase slightly.
- 2) As elevator receipts increase for a given size of elevator, average cost per bushel decreases. At first, the decrease is quite marked, but as receipts increase, it tends to level out. For example, if an average sized elevator of about 150 thousand bushels were to handle 150 thousand bushels, 300 thousand bushels, 450 thousand bushels and 600 thousand bushels, the average cost per bushel would be about 25 cents, 17 cents, 13 cents and 11 cents respectively. Thus, as smaller, low volume elevators are closed out and the grain is diverted to remaining elevators, the grain companies stand to benefit in two ways: smaller higher cost elevators are eliminated, and the remaining elevators can be operated at lower unit costs per bushel.

New Elevator Construction Costs

Grain companies were asked to provide estimates of 1976 elevator construction costs for different capacities and types of elevators.

TABLE V-4						
Average Elevator Operating Costs, 1974, Stratified by Elevator Receipts and Category of Rail Line						
Receipts Range (Bushels)	No. of Manager Units	Average Receipts 1972-73 (bushels)	Average Capacity (bushels)	Handling/Capacity Ratio	Average Total Cost/Bushel(¢)	Total Costs/ Manager Unit
0 - 99,999						
All Elevators	10	71,301	85,700	0.83	36.0	\$ 25,668
Basic Network	8	69,377	81,750	0.85	37.6	26,086
Category B	2	78,998	101,500	0.78	29.8	23,541
100,000 - 199,999						
All Elevators	44	156,498	96,132	1.63	22.3	34,899
Basic Network	28	156,901	97,189	1.61	24.6	38,598
Category B	16	155,793	94,281	1.65	18.2	28,354
200,000 - 299,999						
All Elevators	59	250,981	114,176	2.20	15.0	37,647
Basic Network	31	251,058	122,013	2.06	16.3	40,922
Category B	28	250,896	105,500	2.38	13.6	34,122
300,000 - 399,999						
All Elevators	44	352,466	123,375	2.86	13.7	48,288
Basic Network	20	362,907	137,375	2.64	14.7	53,347
Category B	24	343,766	111,708	3.08	12.9	44,346
400,000 - 499,999						
All Elevators	36	447,887	168,053	2.67	13.2	59,121
Basic Network	16	455,497	161,100	2.83	13.6	61,948
Category B	20	441,798	173,615	2.54	12.9	56,992
500,000 - 599,999						
All Elevators	38	548,698	168,316	3.26	12.8	70,233
Basic Network	21	549,222	163,810	3.35	13.2	72,497
Category B	17	548,051	173,882	3.15	12.2	66,862
600,000 - 749,999						
All Elevators	27	675,197	204,093	3.31	12.0	81,024
Basic Network	17	682,767	206,859	3.30	12.4	84,663
Category B	10	662,327	199,390	3.32	11.2	74,181
750,000 - 999,999						
All Elevators	20	840,550	212,300	3.96	10.4	87,417
Basic Network	11	847,909	224,818	3.77	10.9	92,422
Category B	9	831,556	197,000	4.22	9.8	81,492
1,000,000 and over						
All Elevators	13	1,291,072	339,746	3.80	10.8	139,436
Basic Network	9	1,382,891	385,078	3.59	10.9	150,735
Category B	4	1,084,480	237,750	4.56	10.6	114,955

On the basis of these estimates, it is possible to show that as capacity of elevators increases, the construction costs per bushel decrease. It should be noted that all grain companies do not build the same type of elevators, and the cost per bushel of capacity can vary quite substantially. Some typical sizes and cost ranges are listed below:

100,000 bushel capacity	\$3.50 - \$5.20 per bushel
150,000 bushel capacity	2.80 - 5.00 per bushel
200,000 bushel capacity	2.60 - 4.25 per bushel
250,000 bushel capacity	2.40 - 3.90 per bushel

Elevator Sites

Grain companies are experiencing increasing difficulty in obtaining satisfactory building sites for the construction of primary elevators.

Originally elevator companies were granted sites on railway right-of-way for the construction of warehouses and of elevators.

Currently, in the case of CP Rail, the railway company dictates the site at which elevator companies are permitted to build, then the site is sold to the elevator company by Marathon Realty. The price asked for this property is often exorbitant and the location is not always desirable. The elevator company is then responsible for site improvement and for the cost of the spur or siding which is built by CP Rail according to CP Rail specifications, and in accordance with CP Rail costing. Following construction of the spur, CP Rail charge a maintenance fee to keep the spur operable. The Commission did not hear of similar complaints about Canadian National.

The Commission is of the opinion that upon acceptance of the

principle of compensatory rates that a negotiated lease, approved by the Canadian Grain Commission for the serviced site, should be the practice.

The Commission recommends that the elevator company should have the option to purchase or to lease elevator site and sidings from the railway at a rate approved by the Canadian Grain Commission. If the parties are unable to agree on the terms of sale or rental, either may appeal to the Canadian Grain Commission which will arbitrate the dispute and whose findings should be final.

Off-Line Elevators

There are points on lines scheduled for abandonment where the volume of grain combined with the distance to an alternative delivery point makes it imperative that producers in those areas not be left in an impossible position. Being on rail provides the means whereby grain is carried from the elevator to a main line and thence to export position.

If an alternate means can be suggested that is much less expensive than maintaining the rail line - it should at least be carefully studied - the Commission has done so.

If the cost of rehabilitating and maintaining a line would be prohibitive - what then is the solution? Of the various alternatives, the one that offers the best solution to the producer, in

economic terms, is the off-line elevator.

It is not a matter of building an elevator where no railway exists (although that may be the only solution in rare cases) but rather retaining an elevator in operation when the line is about to be abandoned. The elevator will continue to operate in exactly the same way as when the line was there insofar as the producer is concerned. The producer will get the same service at no extra cost.

Off-line elevators were tried at three locations in the past and were not successful, because the producer who patronized the elevator had to pay extra for doing so. Consequently the producer concluded it was as economical to haul his grain to an elevator on-line, with no extra elevation charge, as it was to haul to the nearer one where he had to pay the extra charges.

These extra costs should, we recommend, be borne by the Federal Government. The justification for this form of subsidy is that if the line is kept in operation to serve the elevator, the cost of keeping it there would be many times greater than the extra elevation and trucking costs. This is illustrated by costs presented in Chapter 10.

Throughout the review of railway branch lines, the Commission had been conscious of a variety of factors which contribute to or detract from the viability of a particular line. Elsewhere in this report the Commission defines viability in the broad sense and provides some insight into the criteria used in an attempt to objectively rank one line with respect to another. The Commission computed the viability of each line in terms of very diverse criteria which included social as well as economic benefits. A number of rail lines which would be

relatively expensive to maintain in terms of cost of service per unit of output have not been specifically recommended for abandonment.

In some cases, it is expected that a line will be more viable at some point in the future due to further development, however, in certain areas an ongoing review will likely demonstrate that retention of service by rail is not economical. In looking at western agriculture and the grain collection system across the prairies, the Commission has become aware of the desirability of continuing to service primary receiving facilities at some points where forwarding by rail is not economical. There should be provision for the operation of "off-line elevators" to satisfy this need.

The Commission has assessed the economics of forwarding grain by commercial truck from some of the areas where the retention of rail appears to be uneconomical. The off-line operation of an elevator as envisioned with trucking from the primary receiving point involves a second handling at the "on-line elevator" or "rail-head".

The off-line elevator operation can be viewed as a means of facilitating the maintenance of grain delivery in a locale at a considerable saving as compared to retention of rail service. The Prairie Rail Authority would be responsible for approving the licensing of an elevator in this mode of operation upon application by a grain company. Approval to operate an elevator off-line would commit the Prairie Rail Authority to payment of commercial trucking costs from the local point to an on-line elevator or transloading facility, and the costs of the second handling of grain at the on-line point. Co-ordination of car

orders at the on-line point and commercial trucking would be a joint responsibility of the railway companies, grain companies and the Wheat Board. Approved trucking routes would take into account the shortest distance and optimum roads. In some cases, it is expected that grain companies will dedicate an older facility exclusively to transloading.

The Commission holds the view that provision for the liberal application of off-line elevator operation will help to create a real understanding of the underlying economies and issues. This provision will not result in a proliferation of off-line elevators and high total cost to the system for trucking and transloading; on the contrary, it will allow for more orderly rationalization by shifting the focus away from rail lines and allowing the industry to view the grain receiving and transportation elements as equal status determinants of system configuration. Thus, the Commission recommends that the Prairie Rail Authority should generally approve grain handling company applications for off-line elevator operation.

The Commission has identified certain likely characteristics of "off-line elevator" points. The following three descriptions encompass the situations in which the Commission foresees the operation of primary grain receiving and forwarding facilities "off-line":

1. "Transitional Operation"

Where immediate abandonment of rail service is recommended, there may be justification for continuing operation of elevators because of a significant increase in hauling distance combined with relatively efficient present elevator operation at the point.

2. "Continuing Operation"

The present configuration of rail lines includes some very low volume branch lines which, nevertheless, do provide service to relatively remote and productive pockets of territory. Analysis of the economics of grain transportation leads to the conclusion that it is not feasible to continue servicing such points by rail.

3. "Frontier Operation"

Transportation has been used as a tool in the development of production throughout the settlement of Western Canada. Traditionally, railways are viewed as the major mode of transportation in this "frontier" context.

With the availability of modern clearing and road building machinery, it would appear that even in the more rugged terrain and climates of today's frontier zones, such as Northwestern Alberta, agricultural development tends to lead rather than lag railway service.

An off-line elevator could be kept in an already established community. In this way the community would not suffer a tax loss. Producers, who were in the habit of delivering to that elevator could continue to patronize the local merchants, etc. There would be some extra use of the highway to the nearest point on rail. The Commission recognizes this and recommends that some

compensation for this incremental traffic be paid to the Province to cover the cost of road maintenance for this additional traffic.

On the assumption that the off-line elevator handled approximately 300 thousand bushels per year, this would mean about 375 truck loads of 800 bushels per load in a 12 month period. Producers generally deliver grain in six of the twelve months. This would mean about 60 round trips per month, - two to four at the most on any given day, with trucking likely to be done by a local trucker.

The Commission recommends that:

- With the abandonment of the Inwood subdivision (Region 3) the elevator at Fisher Branch, Manitoba be set up as an "off-line" elevator, with grain trucked to Arborg, Manitoba;
- the Federal Government, through the Prairie Rail Authority, pay the costs of commercial trucking between Fisher Branch and Arborg and negotiate with the operator of the elevator at Arborg to establish a tariff for the extra costs of the second handle at that location.
- The elevator companies and the Prairie Rail Authority examine the opportunities to establish like operations at other locations with priority given to studies of off-track elevators at Cremona, Alberta; and Gronlid, Waldheim, Arelee, Stewart Valley and Main Centre, Saskatchewan.

Primary and Terminal Elevator Tariffs

The matter of variable handling tariffs at primary elevators was discussed frequently at both local and regional hearings. The majority of farm opinion was that the present system of providing flexibility below the Canadian Grain Commission approved maximum tariff was satisfactory. There does, however, appear to be a considerable amount of misunderstanding about the various tariffs levied, both

hidden and published. The part played by screenings in providing operating revenue in lieu of higher tariff levels is not understood by most producers.

The generation of additional grain handling revenues through blending is also not well understood although it appears to be recognized by most farmers that over regulation of this area of grain handling could be contrary to good merchandizing practice and detrimental to producer returns.

The Commission is concerned about the producer's general lack of knowledge of actual marketing costs even though their total marketing costs may be equivalent to 10 to 20 percent of the price of grain.

The Commission recommends that:

- The Canadian Grain Commission develop a standardized costing system for use by both the primary and terminal elevator system. Such accounting methods to be structured to ascertain separately the costs of cleaning, handling, storage and drying of grains.
- Operators of primary elevators and terminals be required to report costs on a regular basis to the Commission for purposes of monitoring such costs and determining tariff levels.
- Elevator companies be required to show the applicable tariffs for handling, cleaning, storage and freight on the producer's cash ticket.

Overbuilding and Closing of Primary Elevators

As detailed elsewhere in this report, the number of primary elevators was reduced from 5,728 in 1935 to 3,964 in 1976, through consolidation of the system by closures, purchases and amalgamations.

1976 saw a new development with the construction of larger

throughput elevators at Weyburn, Rosetown and Elm Creek. Two similar elevators are projected for Rockyford and Champion in Alberta. The Wheat Pools are building larger elevators in the range of 140 thousand to 160 thousand bushel storage capacity. United Grain Growers are building an even larger unit, 340 thousand bushels, at Dawson Creek. A new concept in elevator construction is being planned by Peace Agra Ltd. at Fairview, Alberta with satellite storage in adjacent communities.

Nevertheless the trend is definitely toward an even lesser number of primary elevators, regardless of what lines are retained or abandoned. The new primary high-throughput elevators will be spaced further apart - about 25 to 30 miles - than has been the situation to this time when primary elevators were located about 8 to 10 miles apart. The economics of the industry are dictating this change. This means that many communities in the 25 to 30 mile gap between delivery points will be without primary elevators. This will be the case even where the rail line remains. In this situation, there is going to be a temptation for competitor grain companies to locate within the gap. If this occurs, the economics of the larger elevator units will be endangered, and the gathering system will become overbuilt and overserviced. Any excess building will naturally be at the expense of the producer, particularly members of the farmer owned grain companies, for it is their money that will be at risk.

The possibility of overbuilding was discussed on many occasions. The Commission was looking for the reaction of producers. No clear consensus emerged. When asked if some measure of control was desirable

the response was generally in the negative from producers and grain companies alike. Most seemed impressed with the desire for more competition, even though additional competitive facilities would add to the producers' costs. It was evident that many of the younger and successful producers were unaware of the chaotic conditions that prevailed under the guise of competition in the early 1920's when there were 166 primary elevator companies operating.

Some expansion will necessarily be required. It is only unrestrained expansion that is to be feared. Competition at all delivery points is neither essential nor economical. Competition between delivery points will accomplish the same ends at a much lesser cost.

The Commission recommends that:

-- On rail lines under the jurisdiction of the Prairie Rail Authority -

- a) that elevator companies seeking to expand or build new plants first obtain the approval of the Authority;
- b) that elevator companies desiring to close an elevator file notice with the Authority and post such notice in the elevator for the information of their customers 12 months prior to the scheduled closing date.

-- On the Basic Network lines -

- a) that the Canadian Grain Commission and the elevator industry study this problem and develop an approach which will prevent overbuilding and undue competition in some areas and underservicing and a lack of competition in others.

Cleaning of Grain - Screenings

Considerable discussion ensued at some hearings regarding the cleaning of grain and the use of screenings. This is quite natural since screenings can denote "junk" to some grain farmers; cheap feed to some livestock feeders; a hidden grain company tariff to others; and a profit opportunity to others. However the cleaning of grain and the disposal of screenings are viewed, they represent a major factor in Western Canada's grain handling system. On the average one out of every forty cars of grain shipped is screenings. Whether this represents a loss of cheap feed to the prairie livestock producer or a windfall to the grain companies is open to question.

Screenings result from the removal of foreign materials from delivered grain to permit grain to meet the standards of purity established for various grades. Upon delivery of grain to the primary elevator a dockage assessment is established. In effect this dockage represents the percentage of a given delivery which is screenings. Farmers are paid on the basis of clean grain therefore the screenings are in effect free to the grain company. Naturally the grain companies wish to maximize the profits realized from the disposal of this product. To do so the grain companies carry out the separation of the screenings from the grain where it can be done at least cost. Cleaning is highly volume related therefore it has been done historically at the terminals. With the majority of the company owned terminals located on water this cleaning takes place at Vancouver and Thunder Bay.

It should be noted that the cost per bushel of cleaning at ordinary country elevators is nearly double the cost of cleaning at a terminal with two million bushels or more of annual cleaning capacity. In addition, there are problems at primary elevators of a lack of experienced labour, shortage of binning for various screening grades, insufficient quarters for car lots of various grades, etc.

The total cost of screenings to the companies is the cost of shipment to port at statutory rates plus the cost of cleaning, segregating and in the case of refuse screenings, pelleting. The average transportation rate is approximately \$4.00 per ton, cleaning costs approximately \$2.00 per ton and pelleting costs \$10.00 per ton. At selling prices in Vancouver of \$70 to \$95 per ton this represents a good return to the grain companies. Screenings, whether as a separate commodity or as a part of a grain shipment are transported by rail at the statutory rate to Thunder Bay or Vancouver. The exception is screenings which are sold out of Vancouver terminals for domestic utilization in British Columbia, which are assessed domestic rates. Screenings shipped from these same terminals to the United States however, are assessed the export rate. This gives the United States buyer an unfair advantage.

Screenings are separated into various grades. From 5 to 20 percent may be recovered as whole grain through the cleaning process. Of the remainder, 20 percent are recovered #1 feed screenings consisting primarily of cracked grain and buckwheat. Approximately 12 percent is mixed feed oats and the remaining 68 percent which consist

primarily of small seeds and dust, is known as refuse screenings. Approximately 95 percent of #1 feed screenings are consumed domestically while over 90 percent of refuse screenings are exported.

Current Production and Utilization of Prairie Screenings

- Production - 800 thousand tons - 28 million bushels.
- Recovered as grain - 104 thousand tons - 3.6 million bushels sold as grain by the grain companies.
- #1 screenings - 139 thousand tons - 4.9 million bushels - 95 percent to domestic market.
- Mixed feed oats - 83.5 thousand tons - 2.9 million bushels - export and domestic markets.
- Refuse screenings - 473 thousand tons - 90 percent export market.

These screenings could be utilized on the prairies for livestock feed; the #1 screenings as poultry and swine feeds and the remainder for cattle. The economics of doing so will vary from time to time depending on the relative prices of feed grains versus screenings.

Screenings represent a large quantity of product, the 28 million bushels produced is equivalent to the total record Churchill throughput of 1976. These are hauled from the prairies at a cost to the transportation system and represent no return to the producer except as an unknown reduction in handling tariffs and as patronage dividends. The interior government terminal elevators at Moose Jaw, Saskatoon, Edmonton, Lethbridge and Calgary have a combined cleaning capacity of 205 million bushels per year. These facilities are in place and it is a waste of existing resources if they are not fully utilized.

It is acknowledged that extensive use of these terminals would result in some loss of revenue to the grain handling companies. However, it is the economics of the total system which is of primary importance and in the long term interests of all producers. Maximum benefits can only be achieved if total operations are carried out at minimum cost. This should include the interior government terminal elevators on the prairies where the alternative screening markets either export or domestic can be fully exploited.

There are times when some grades of screenings can be best used on prairies and others shipped to export. When cleaning is carried out on the prairies the market alternatives are broadened. The fact that cleaning can currently be done at interior government terminal elevators is important in that these are already in place. Eighty-five percent of the screenings produced at these terminals are sold into local prairie markets substantiating the claim made by many that prairie markets do in fact now exist for screenings.

There is a requirement for increased economic opportunity in Western Canada. One of the opportunities manifests itself in the further processing of agricultural commodities through cleaning of grain. A further opportunity presents itself through the provision of cheaper feed alternatives for livestock.

All of these 800 thousand tons of screenings could be used on the prairies for feed. It is in the interests of both the grain producer and the livestock producer to see that screenings be more readily available on the prairies. As long as most cleaning is done

at Vancouver and Thunder Bay, these opportunities are denied to prairie livestock and grain producers. On the other hand if cleaning is done on the prairies all options are open.

Currently the export market at Vancouver largely determines the price for the refuse screenings. Approximately 50 percent of the screenings produced in Canada are refuse. The 473 thousand tons which this represents could easily be fed on the prairies; however, cleaning economics and demand, will dictate when that will be. As long as the export price for refuse screenings is high relative to alternate feeds available on the prairies, it will probably continue to be profitable to export refuse screenings through the West Coast.

There is no "close-by" domestic market for screenings at Prince Rupert and Churchill and there is a very limited local market at Thunder Bay. For exports all three of these ports are at a disadvantage compared to Vancouver. Historically, the Thunder Bay price for refuse screenings is constantly lower than at Vancouver. The main market for Thunder Bay "refuse" screenings is Britain. The pending European Common Market tariffs may render this market even less attractive.

Summary

1. Screenings represent approximately 2.5 percent of all grain delivered, or 28 million bushels.
2. Screenings are dockage and the producer is not paid for them. They accrue to the grain handling agency free at point of delivery.

3. The cost of screenings to the grain company is the cost of separating them from the grain, the cost of transportation at statutory rates and cost of marketing, i.e. pelleting, handling, administration of sales, etc.
4. Of the screenings delivered, approximately 13 percent (104 thousand tons or 3.6 million bushels) is recovered and sold as whole grain. Of the remaining 87 percent:
 - 20 percent or 139 thousand tons represents #1 feed screenings;
 - 12 percent or 83.5 thousand tons mixed feed oats;
 - 68 percent or 473 thousand tons refuse screenings.
5. Screenings are sold wherever the most profit can be realized. Currently this is domestically for #1 screenings and export for refuse screenings.
6. All of the screenings produced in Western Canada could be utilized in Western Canada for livestock feed.
7. The screenings will be used for feed on the prairies when available and economics dictate.
8. In light of the alternatives presented, the cleaning of grain at inland facilities equipped to do so appears to offer the greatest flexibility in exploiting of market opportunities.

Western grain and livestock producers are in an improved position and will realize maximum returns if grain cleaning is carried out at a location with free access to all markets.

Screenings now constitute a hidden tariff as far as the grain producer is concerned. This should not be so.

Costing procedures should be developed by the Canadian Grain Commission which are uniform in application across the grain handling system. Specific costs and margins for all operations should be clearly identified. Specific tariffs should be established on the basis of these costs. To do otherwise distorts handling economics and masks the true costs of doing business.

CHAPTER 6

THE RAILWAY SYSTEM

THE RAILWAY SYSTEM

The transport of large quantities of grain, produced on the prairies, over the long distances necessary to bring it to export position at seaboard, is a sizeable transportation function. There are approximately 21,500 miles of rail network used in moving grain from the primary elevator points to export position.

The responsibility for the physical allocation of motive power and grain cars rests with the railways. This operation is complicated by the seasonal shifts in grain movement, particularly to Eastern Canada. Typical is the rail movement of grain from the Georgian Bay Ports to the Atlantic Ports each winter, requiring the transfer of adequate power and equipment from the West, but at the same time sufficient equipment must be left in the West to maintain the heavy year-round movement to the West Coast, and to fill the Thunder Bay Terminal Elevators preparatory to the opening of navigation in the spring.

Shipping Blocks

For purposes of co-ordinating railway grain transportation, the railway network on the prairies is divided into 48 segments. Each is known as a shipping block. There are 25 blocks on the Canadian National, 20 blocks on CP Rail, 2 on Northern Alberta Railways, and one on the Great Slave Lake Railway. A block is a grouping of railway train runs established so that a railway can, within a block, provide flexible train service from week to week, to the various branch lines. There may be two shipping blocks in one geographical area, one for CP Rail and one for Canadian National.

A typical shipping block includes about 40 delivery points with some 125 elevators. The block is designed so that companies operating elevators have some flexibility in placing shipping orders. There are three to sixteen train runs in a shipping block. In the planning of train runs the various factors taken into account include, minimum and maximum number of cars, car spotting, capacity of elevators, available stock of equipment, scheduled vessel arrivals, volume of grain enroute, amount of grain required and the rate of unload of cars at the terminals. The Canadian Wheat Board advises grain companies of the number of shipping orders it may distribute in each block the following week. The grain company allocates these orders to the individual primary elevator.

Movement of Rail Equipment

The railways ability to have empty cars in the numbers required at the proper distribution points is dependent upon the rate of unloads at terminal elevators. Cars unloaded at the terminal elevator should return to the primary elevator system for reloading without delay. A low rate of terminal unloading, because of terminal congestion or other reasons, affects the reloading capability of the system some days later. The movement of both empty cars and loaded cars is a complex exercise in logistics, and one which demands constant and careful supervision.

Equipment returning from terminal elevators, at Thunder Bay and the West Coast, is moved to main classification yards of each railway. Calgary and Winnipeg are the main classification yards

for CP Rail, and Edmonton and Winnipeg for Canadian National Railways. From these main classification yards trains of empties are directed to distribution yards in the quantities required for the Canadian Wheat Board shipping program to make up the various train runs which branch out from these yards. Distribution yards are located at centers such as Winnipeg, Brandon, Souris, Regina, Moose Jaw, Biggar, Saskatoon, Calgary, Edmonton, Hanna and Medicine Hat. Upon arrival at these distribution yards, empties are marshalled into the required numbers to match train runs for the various shipping blocks. Generally the distribution points are where train and engine crews are based.

There are a total of four main classification yards, 22 distribution yards and 113 subdivisions involved in the Western Canadian grain movement.

At Terminal Ports

Export grain from primary elevators moves principally to 4 Canadian ports, Thunder Bay and Vancouver, served by both CP Rail and Canadian National Railways, Prince Rupert and Churchill served exclusively by Canadian National. Located at these ports are 23 terminal elevators, 17 at Thunder Bay, 4 at Vancouver, and one each at Prince Rupert and Churchill. At Thunder Bay and Vancouver, while certain elevators are switched exclusively by one railway or the other, carloads from both railways have access to all elevators through car exchange agreements. The same is not true at Prince Rupert or Churchill. Grain originating on CP Rail

lines is not shipped to these two ports, despite the existence of physical interchange tracks at many common rail points.

Railway Equipment

-- CP Rail

CP Rail has nine thousand, 50 and 60 ton, 40 foot standard box cars which are used solely for the movement of grain. Additionally, there are 11 thousand 60 ton six foot door, 40 foot standard box cars which potentially could be used to haul grain. The percentage of these cars in grain traffic varies over time, although some are always involved in grain movements. There are 1,200 - 60 ton box cars with roof hatches designed to haul potash. They can be used for grain movements during periods of low potash and high grain requirements.

CP Rail's covered hopper fleet (excluding government owned equipment) is presently about seven thousand units. On the average, about 500 of these units are employed in the grain trade. This varies between 100 and 1,500 depending on potash movement requirements.

CP Rail received 3,202 government owned covered hopper cars a few years ago and will receive more than one thousand in an order recently placed with the car builders. These 100 ton steel cars are required to be used in movement of grain west of Thunder Bay.

The minimum and maximum availability of equipment at present for the haulage of grain by CP Rail is as shown in the following table.

TABLE VI-1
CP Rail Car Inventory

Equipment	Minimum		Maximum	
	# of Units	Capacity (tons)	# of Units	Capacity (tons)
-50 & 60 ton Box Cars	9,000	490,000	9,000	490,000
-CP owned covered hopper cars (average)	500	46,000	500	46,000
Forestry Cars			11,000	660,000
Potash Cars			1,200	22,000
Sub Totals	9,500	536,000	21,700	1,268,000
-Gov't owned covered hoppers - on hand	3,202	320,200	3,202	320,200
TOTALS	12,702	856,200	24,902	1,588,200

-- Canadian National

Canadian National had 11,600 standard box cars in 1974 which were available for transporting grain. This includes approximately four thousand standard box cars normally used in moving forest products. These cars can also be used to haul grain and some are used when the demand by the lumber industry slackens.

Canadian National's covered hopper fleet consists of about 9,600 units. None of these units are assigned exclusively to the grain trade. However, as fertilizer and potash demand usually slackens during the summer season, as many as one thousand of these covered hopper cars are used to haul grain during this period. In addition, the Federal

Government has provided Canadian National 2,798 covered hopper cars and will supply approximately one thousand more later this year (approximately 1,600 of these government owned hopper cars are 90 ton aluminum cars; the balance, 100 ton steel). These are for use exclusively in the movement of grain west of Thunder Bay. The latest order consists of 824 - 70 ton aluminum cars which can be used on the lighter weight lines on the prairies.

To summarize, the minimum and maximum availability of equipment for the transport of grain by Canadian National is:

TABLE VI-2 Canadian National Car Inventory				
Equipment	Minimum		Maximum	
	# of Units	Capacity (tons)	# of Units	Capacity (tons)
40' Box Cars	7,600	418,000	11,600	638,000
-CN owned covered hoppers (average)	0	0	1,000	100,000
Sub Total	7,600	418,000	12,600	738,000
-Gov't owned hopper cars (on hand)	2,798	263,800	2,798	263,800
TOTAL	10,398	681,800	15,398	1,001,800

Future of the 40 Foot Standard Box Car

No 40 foot standard box cars have been purchased by the Canadian National or CP Rail during the past fifteen years. CP Rail purchased 500 in 1962, and Canadian National purchased one thousand in 1957.

In recent years, both railways have been acquiring 50 foot box

cars and covered hopper cars. As these cars are added to the system, old 40 foot standard box cars are retired from service. Thus, the number of 40 foot standard box cars for grain service has been declining in total.

In 1973 the Federal Government undertook a box car repair program. Total cost of this program was \$3.3 million. Unlike the branch line subsidy program which is a continuing program, the payment to the railways by the Federal Government for the rehabilitation of specific box cars which were to be used exclusively for the carriage of grain was a one-time program. Under this program, the Government paid for one-half of the total repair costs on one thousand CP Rail cars and on 1,400 Canadian National cars. In effect, the Federal Government put 500 CP Rail cars and 700 Canadian National cars in grain service.

Hopper Cars

The Federal Government recently announced the purchase of an additional two thousand covered hopper cars to add to the grain fleet. This will bring the total number of government hopper cars in service to eight thousand.

This latest purchase was made to assist the Canadian car manufacturers, which are facing slowdowns, to maintain employment in their plants in Eastern Canada. This program, said to cost \$90 million must not be regarded as a subsidy to western producers. These cars are not now needed in the western fleet, but the program can be justified because they could be needed in the future.

CP Rail will receive slightly more than half of the two thousand cars on order. These will all be 100 ton steel cars. Canadian National will receive 824 - 70 ton aluminum cars and the balance as 100 ton steel cars. These smaller cars will be able to operate on the lighter lines, those with a gross carrying capacity of 177 thousand pounds. The Commission is of the view that the cost of rehabilitating or upgrading the lighter capacity rail lines far outweighs the costs of providing lighter equipment for these lines. With the 70 ton car, primary elevators on these lighter capacity branch lines will be able to enjoy the economies and convenience of the hopper car without the extremely costly alternative of upgrading the roadbed and rail on these lines. CP Rail has undertaken to use the 100 ton steel cars on their 220 thousand pound capacity lines but loaded only to weights equivalent to the 90 ton aluminum cars.

Utilization of Equipment

Utilization of rail equipment is measured by the number of ton miles performed by the piece of equipment in question in a specific time period. The greater the number of ton miles performed, the higher the utilization.

In grain service, because the equipment must be returned to primary elevators empty for reloading, utilization of equipment can be approximately measured by determining the time required for a car cycle. A car cycle consists of the loading of the car at the primary elevator, its movement to a port terminal where it is emptied, and its return to a primary elevator ready for loading grain. The time required to complete a car cycle can fluctuate considerably during a

year because of demand for the movement of grain from primary elevators, labor problems in one or more sectors of the grain industry, or railway operating problems. Actual average car cycle times for 1971 ranged from a low of 13 days to a high of 24 days in the Thunder Bay service, and from a low of 17 days to a high of 26 days in the Vancouver service.

Many factors affect the railways' ability to obtain maximum utilization from their equipment and many of these are beyond their control. For example, rail service is provided seven days per week, but loading takes place in the country only about five and one-half days and port terminals do not unload on Sunday. The vagaries of ocean shipping also tend to affect port terminal operations and the consequent congestion inhibits the unloading of railway cars and delays return of empties to the country for reloading. Labor interruptions in both handling and transportation segments of the industry and severe weather, particularly in the mountains, can create difficulties from time to time.

Because of the high capital cost of rail equipment, it is important that it be utilized to the greatest possible degree.

The Block Shipping System has improved car utilization considerably. Prior to its implementation, there was very little effective control over what was loaded into box cars in the country and hence appeared at the port terminals. What this meant to the railways was that grain, for which there was no demand at port terminals, sometimes remained stored in box cars for long periods of time.

A high level of car utilization can be achieved by:

- 1) Loading only the grades and kinds of grain required to meet current sales commitments;
- 2) The prompt unloading of these grains upon presentation at export terminals;
- 3) Minimizing short-term fluctuations in the weekly rail transportation workload levels.

The Commission asked the railway companies to examine the impact of network rationalization on routing, car cycles, motive power and car requirements.

In reporting on a joint examination, CP Rail, in their July 29th submission to the Commission, reported:

"In conjunction with Canadian National, estimates were made regarding which of the retained lines would receive the grain from lines that are proposed for abandonment. The 1974 direct shipment carloads of grain was the traffic base for this analysis. The new traffic volume on each retained line was assumed to have the same destination pattern as the traffic on the retained lines had before rationalization. This analysis assumed that the lines recommended for deferred discontinuance were retained.

"The operational characteristics of the traffic on the retained lines were simulated, based on the 1974 operational characteristics of the traffic (i.e. car mix, car days, car miles, train weights, etc.). This 1974 operating data base is the same data base submitted to the Snavelly Commission."

The results of this analysis, based on the average car, before and after rationalization, are shown in the following table.

TABLE VI-3 Railway Equipment Utilization - Canadian National Rationalization Proposals		
Average per Carload	Before Rationalization	After Rationalization
Car Days	22.9	22.4
Car Miles Empty and Loaded	1,564.6	1,556.7
Diesel Unit Miles	50.6	50.2
Train Weight	5,022 tons	5,050 tons

The Canadian National estimated that, with the branch line abandonments they had recommended, their total equipment requirements would be reduced by 21 diesel locomotive units and 1,740 grain box cars.

Canadian National, in their final submission to the Commission at Saskatoon, stated the effect on Canadian National operating efficiency of their proposed abandonment schedule of 2,532 miles to be a reduction of 636,220 car days.

TABLE VI-4 Improvements in Operating Efficiency					
	Canadian National Estimated Reduction				
	Track Miles	Train Miles	Diesel Unit Miles	Car Miles	Car Days
Abandonment - in 1977	2,030	329,666	730,234	17,968	340,543
- subsequent to 1977	502	279,202	642,305	15,270	295,677
TOTAL	2,532	608,868	1,372,539	33,238	636,220

Larger volumes of grain could be handled with current rail equipment if utilization of the equipment were increased. The breakdown of an average car cycle in 1973 showed the majority of time was spent in the yards loaded and empty, totalling close to 60 percent of the car cycle time. This then is the area of greatest potential improvement.

TABLE VI-5 Breakdown of an Average Car Cycle* Canadian National Railways		
Function	% of Time	Cars of 22.9 car cycle
Enroute empty	6.1	1.4
Enroute loaded	7.4	1.7
Unloading	13.5	3.1
Loading	13.5	3.1
Standing in yards-loaded 1)	25.0	5.7
Standing in yards-empty 1)	34.5	7.9

	100.0	22.9
* From a paper "Dimensions of the Car Supply Problem", John Gratwick, V.P. CNR, at the Symposium "Rail Car Utilization and Supply Problems and Possibilities", Vancouver, February 28, 1974.		
1) Includes being classified and assembled into trains, moving within terminals and standing idle.		

The railways predicted reduction in car cycle of one-half day through implementation of their recommendations would increase the volume of grain the present equipment could handle by about 14 million bushels per year.

TABLE VI-6				
1974 Car Cycle				
1974 Direct Grain Shipments*				
	Car Loadings	Car Days	Tons	Car Cycle
CP	160,431	3,679,210	10,460,400	22.9
CN	166,104	3,775,531	9,603,900	22.7
	326,535	7,454,741	20,064,300	22.8
* Volume 1, Report of the Commission on the Costs of Transporting Grain by Rail.				

As the following table illustrates, a reduction of 2.9 days in the car cycle time would permit the carriage of an additional 102 million bushels of grain. With a reduction of 7.9 days to a 15 day cycle, present equipment could carry a potential 1.1 billion bushels or a 52 percent greater volume than now carried.

TABLE VI-7				
Projected Annual Volumes of Grain With Reduced Car Cycles				
Annual Volumes				
Car Cycle	22.9	22.4	20.0	15.0
Millions of Tons	20.0	20.4	22.8	30.4
Millions of Bushels	735	749	837	1,117

Recommendations

To increase the level of efficiency in car utilization, the Commission recommends:

- 1) An interchange of grain traffic between rail carriers, at open interchange points in Western Canada, to use the shortest least cost route to destination. Similar to the Calgary/Edmonton interchange agreement;
- 2) An interchange of traffic between carriers to provide CP origin cars access to port terminals of Prince Rupert and Churchill, now served exclusively by Canadian National;
- 3) The Government car fleet become interchangeable between railways. That cars not be assigned exclusively to one railway;
- 4) Expansion of the grain co-ordinator function to inland yards in Winnipeg, Kamloops, Edmonton and Calgary to ensure the movement of the grain required;
- 5) Rail car unloading at terminal elevators must be on a seven day per week basis;
- 6) That the Department of Transport and the railways undertake an experiment to modify present box cars with roof hatches and end unload gates, for use on the lighter prairie branch lines;
- 7) Future orders of hopper cars must be co-ordinated with the needs of the Prairie Rail Authority taking into account the large proportion of light carrying capacity lines under the Authority's jurisdiction where 70 ton capacity hopper cars are preferable in replacing box cars.

Rail Car Allocation

The September 1975 study of car allocation procedures by J.F. Mants and recently suggested modifications to some of the original recommendations should correct many of the problems associated with car allocations.

The Commission understands that the recommendations have generally been accepted by the grain trade, and that they will be reviewed, and changed if necessary, after a suitable period of use.

The Mants report contained the nine following recommendations:

1) Documentation of Allocation Procedures

That a documentation of the system used in allocating shipping orders, and calculations in dealing with congestion be prepared and kept current.
That each grain company receive a monthly statement indicating licensed capacity, space, handlings for the period, cars shipped and twelve month handling percentage.

2) Study of Block System

That a technical committee be re-established to review the results of seven years operation of the block shipping system.

3) Refinement of the Block as the Basic Unit for Administration

That sub-blocks be established as the basic unit for car allocation, quota administration and congestion calculations, these sub-blocks to be based on train runs (railroad subdivisions).

4) Outstanding Shipping Orders

That steps be taken to keep the outstanding orders within a range not exceeding 500 to 600 cars under normal conditions.

5) Primary & Alternate Delivery Points

That producers elect only a primary delivery point but have the right to deliver to any delivery point in the Wheat Board area.

6) Terminating Quotas

That the use of terminating quotas continue and that a consistent policy of cancellation or termination of quotas be announced at the beginning of the crop year and applied and the use of open quotas be discontinued.

7) Modification of Grain Car Allocation Formula

This recommendation suggests that space in the primary elevator system be maintained at 35 percent of the licensed capacity. When a company has less than 35 percent space in a block or sub-block it will be considered congested. When all companies have 35 percent or more space, shipping orders will be allocated on the percentage of business done by each company the previous year. When the space of any company in a block or sub-block drops below 35 percent, shipping orders will be issued first for that company and the remaining orders will be allocated to companies on the percentage of business handled in the previous year. When all companies in a block are congested, orders will be allocated progressively until all companies space is as close as possible to 35 percent. Provision is made for new companies without any previous record to ship Wheat Board grain when called for and for shipping orders for non-board grains to meet sales contracts within the time constraints applying to all companies.

8) Leased or Owned Cars

That conditions be set out for use of leased or owned cars outside of the allocation formula.

9) Authority for Allocation of Cars

That the Canadian Wheat Board continue to administer the allocation of rail cars used in the movement of grain.

Dissatisfaction with car allocations was expressed at many local hearings. The Commission sensed that the procedures used in allocating cars were not generally understood. Currently the Canadian Wheat Board issues shipping orders on a block basis to the grain companies represented in that block. The grain companies then allocate the orders to their elevators in the block as they see fit. It then becomes the responsibility of the railway company to spot the cars at the elevators designated by the grain company. Many times the railways were blamed for failing to provide cars at primary elevators, when no shipping orders had been allocated to them by the grain companies. The railways admitted that while they were sometimes late in spotting cars at certain points they had never failed to move the quantities of grain requested.

The Commission recognizes that congestion at primary elevators can be serious for the producers affected. It is also of the opinion that no perfect system to relieve congestion is likely to evolve, that will be effective under all conditions. When Canada's export grain sales are buoyant and the various components in the transportation and grain handling systems are functioning properly elevator congestion is not a serious problem. Conversely, when markets shrink or kinds of grain and grades required by the market are not available, problems of congestion may become acute.

Some producers suggested that discrimination existed in car allocations between rail lines only capable of handling a standard box car and rail lines capable of handling a 90 ton or 100 ton covered hopper

car. Upon investigation the Commission determined that the Canadian Wheat Board does take the capacities of the different types of cars into their calculations to determine number of cars required to move the desired volume of grain. On a car for car basis over a short period of time, what may appear discriminatory will be adjusted by the provision of more box cars than hopper cars to move the same volume of grain.

Allegations were made at many local hearings that some delivery points were denied cars when other points in the same block were receiving cars, even when kinds and grades of grain were similar. The inference was that grain companies were using car allocations to force closure at some stations to hasten elevator rationalization.

The Commission recommends that a procedure be established by the Canadian Wheat Board to:

- 1) Upon receipt of a written request from ten or more permit book holders at a grain delivery point issue statements:
 - a) showing the number of cars allocated to a particular grain company in that block or sub-block and the kinds and grades of grain ordered;
 - b) the number of cars allocated by individual companies at that point and the kinds of grain and grades ordered;
 - c) the number of cars allocated by individual companies to other stations in the block or sub-block showing the kinds of grain and grades ordered.

Railway Subsidies

The National Transportation Act of 1967 established the terms of reference for the regulation of the transportation industry in Canada and, in particular, defined and provided the mechanism to implement a National Transportation Policy.

The Act declared that:

"... an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada."

Furthermore, it provided that:

"(d) each mode of transport as far as practical, should receive compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and"

The objectives and principles enunciated in the National Transportation Act were carried into the Railway Act.

In the early 1960's, the railways had applied for a number of branch line abandonments, leading to concern in many quarters over the type of system which would be left after such piece-meal abandonments.

With the intention of passing legislation providing a more comprehensive and reasonable basis for branch line abandonments, the Government requested the railways to place a moratorium on branch line abandonments in the Prairie Provinces.

The railways agreed, and from 1963 to the passage of the Act in 1967, only four cases were dealt with.

About the time of the passage of the National Transportation Act, the Federal Government passed an Order-in-Council which prohibited the railways from applying for abandonment of all lines in Western Canada, except for 1,839 miles. In July 1973, at the Western Economic Opportunities Conference, in Calgary, it was announced that abandonment of these lines was also prohibited and the entire system frozen until January 1, 1975.

The National Transportation Act created both the Canadian Transport Commission and its Railway Transport Committee. The areas of responsibility of that Committee include the abandonment and discontinuance applications, subsidies, traffic and freight rate matters, railway construction, operations and safety.

The Act provides for the subsidization of an uneconomic line which is ordered by the Committee, or by Order-in-Council under Section 258(1), to be continued in operation. Following the Western Economic Opportunities Conference, all lines were protected. The railways were prevented from applying for abandonment. Section 258(1) of the Railway Act came into operation and the railways were then enabled to obtain subsidies for uneconomic lines without applying for abandonment.

For 1975, subsidies were claimed on 12,225 miles of line, which represents approximately 63 percent of the total prairie network. The history of subsidy applications is given in Table VI-8.

TABLE VI-8

Claimed Losses on Prairie Branch Lines

By CP Rail, C.N.R. and N.A.R.

Under Sections 256 & 258 of the Railway Act

And Payments To December 31, 1976 - Years 1967 - 1975

	CP RAIL		CNR	
	Claimed Losses	Payments To Date	Claimed Losses	Payments To Date
1967				
1968				
1969				
1970	18,124,646	13,279,685		
1971	21,656,090	15,892,947	22,189,325	15,706,014
1972	19,876,298	16,076,935	33,049,709	20,530,312
1973	24,089,952	16,916,980	39,039,141	27,076,039
1974	34,665,591	29,298,187	68,719,409	44,441,012
1975	48,467,219	33,859,182	67,100,828	46,372,418
1967-75	\$ 166,879,790	\$ 125,323,916	\$ 225,098,412	\$ 154,125,795
<hr/>				
	NAR		TOTAL	
	Claimed Losses	Payments To Date	Claimed Losses	Payments To Date
1967	2,164,666	---	2,164,666	
1968	2,569,102	903,551	2,569,102	903,551
1969	3,065,247	897,114	3,065,247	897,114
1970	3,001,265	1,173,833	21,125,911	14,453,518
1971	2,986,891	1,120,191	46,832,306	32,719,928
1972	3,213,241	1,162,681	56,139,248	37,769,928
1973	3,452,334	1,552,828	66,581,427	45,545,847
1974	5,287,417	1,782,196	103,672,417	75,521,395
1975	5,372,830	2,269,604	120,940,877	82,501,204
1967-75	\$ 31,112,993	\$ 10,861,998	\$ 423,091,201	\$ 290,311,709

Until December 31, 1976 the three railway companies had filed claims of \$423 million since the beginning of the branch line subsidy program. Subsidy payments to December 31, 1976 totalled \$290.3 million or 68 percent of the amount claimed. CP Rail, in this period, have received 75 percent of their claims, Canadian National 68 percent and, in the case of, Northern Alberta Railways 35 percent of their claims had been processed and paid.

The differences that exist between the claimed loss by the railways and the actual payments, are due to a number of unresolved issues between the railway companies and the Canadian Transport Commission. Over a period of years these differences have increased to a point, at the time of writing, of being \$132.8 million. The Commission asked the railway companies and the Canadian Transport Commission to identify these differences, and the magnitude of each. While identifying some of the issues, the railways found it difficult to respond to this Commission's inquiry as, they contend, they have not been advised by the Canadian Transport Commission in detail, of the reasons for differences on all lines, or the amounts disallowed.

The Canadian Transport Commission advised this Commission that these disallowances pertain generally to outstanding legal and costing issues for which amounts can be readily identified, and which will be resolved by the Railway Committee Staff. None of these issues, dating back to 1967, the beginning of the program have been resolved, nor have claims been reduced by a disallowance.

The Canadian Transport Commission refused this Commission's request for a breakdown of these major disallowance and holdback items. Despite the fact that the Canadian Transport Commission had earlier agreed to supply such a breakdown, this Inquiry Commission received the following communication on March 14, 1977.

"Your request for a breakdown of the amounts disallowed and heldback with respect to branch line subsidy claims has been carefully reviewed. Whereas you were previously provided with a list of the major disallowance and holdback items, it has been decided that no breakdown of the amount outstanding will be provided. As you are aware, the amounts currently outstanding reflect an interim position pending the resolution of numerous costing and legal problems. Until such issues are finalized and subsidy payments adjusted accordingly, it is considered that release of interim figures would serve no useful purpose and could in fact cause considerable misunderstanding.

"Furthermore, the relevance of this data to the examination of individual branch lines for purposes of determining the feasibility of abandonment is not clearly understood."

The Commission recommends:

The Canadian Transport Commission, in a report to the Minister of Transport, on or before July 31, 1977, should identify the legal and costing issues and the amounts owing for each branch line, also advising the railways which items are disallowed, and the reasons therefore; a listing of those items which are holdbacks, the amounts and reasons, and establish a timetable for resolution of unresolved claims.

Unit Trains

The Commission heard a lot of talk which suggested that unit trains would bring about the millenium in the transport of grain to export positions. The unit train concept has been eminently successful in the transportation of coal, potash and other bulk commodities, but that does not mean that it can be applied holus-bolus to grain.

Coal, potash, sulphur and such commodities are generally of one quality from the same mine or source. It is practical, in their case, to load a train of cars in one operation, and to unload those cars as a continuous operation into the hold of a ship.

Grain is different. There are many types of grains and grades of grain and grains of different qualities. It is seldom, if ever, possible to find an inland elevator with sufficient grain of one grade and quality to load 125 or more hopper cars as one operation. This requires 375 thousand bushels which is seldom available at one location, or from one source, with a loading track capable of holding 125 or more cars. There are no conventional port terminals equipped to accommodate unit trains in storage or direct to vessels.

An experimental unit train might be made up and loaded from one of the Government elevators, or one of the other similar facilities, but that would require the intervention of the Canadian Wheat Board in allocating grain, of the grade and quality to that facility so that the required 375 thousand bushels would be available for immediate loading at the precise time the 125 hopper cars were on the loading track.

No such loading tracks, or facilities, are available in the prairie region, nor was the Commission told that any were contemplated. The loading tracks at Weyburn, Elm Creek or Rosetown are not so capable. A continuous loading operation is not accordingly possible.

There exists much confusion between what is being called a unit train and what is known in railway terms as a solid grain train.

Grain to Vancouver, Thunder Bay, Churchill and Prince Rupert is now moved in solid grain trains. These trains carry all grain but not necessarily grain all of the same grade and quality, nor even the same kind of grain. The solid train may carry wheat, oats and barley, or all wheat or oats or barley.

The solid train is made up at designated marshalling yards, such as Winnipeg, Moose Jaw, Calgary, Edmonton and others from cars of grain brought to these points from the main and branch lines feeding into them.

Having arrived at Thunder Bay or Vancouver, these solid trains are broken up and the cars distributed to the terminals there in accordance with the directions of the Controller. It is his function to spread the incoming grain cars as equitably as possible among the several terminal elevator companies located in the port. In single terminal ports, such as Churchill and Prince Rupert, the grain, such as it may be, as called for by the Canadian Wheat Board, is unloaded into the terminal into the several bins available to receive differing grades, etc.

The unit train concept would not be of much economic value to producers unless a new and marked departure in the freight rate structure for the carriage of grain was adopted by Parliament in which the mileage related statutory rate principle is discarded.

The Commission is firmly of the view that variable tariffs which would give plants, capable of loading unit trains now or in the future any preferential rate treatment, must not be introduced.

The Commission deals with statutory rates and their implications in Chapter XIII.

The Producer Car

The right of producers to load their own rail cars is embodied in the Canada Grain Act 1970 Sec. 71 (1).

"A producer of grain who has grain in sufficient quantity to fill a rail car, that he may lawfully deliver to a railway company for carriage to a terminal elevator, or to a consignee at a destination other than an elevator may apply in writing to the Commission, in prescribed form, for a railway car to receive and carry the grain to the elevator or other consignee."

The right of producers to order and load their own car had its origin in a controversy between the railways and the owners of flat warehouses. The warehouse was the original facility to accumulate grain for loading to rail cars in Western Canada. As country elevators began to make their appearance in Western Canada these warehouses became technically obsolete. The railway companies favouring the new elevator facility undertook to provide lease sites free to companies willing to build elevators. The railways agreed to supply rail cars only to the

elevators at stations where there were both elevators and flat warehouses. The Federal Government appointed a Royal Commission in 1899 to inquire into producers complaints, among them the refusal of the railways to provide service to flat warehouses. Recommendations of that Commission led to the passage of the Manitoba Grain Act in 1900, which prohibited the railways from refusing to service flat warehouses. Amendments to the Act in 1902, introduced the car order book. Persons wishing to obtain railway cars for the shipment of grain were required to place an application on the car order book, maintained by the railway agent. Cars had to be distributed in order of application.

In the well known Sinaluta case, the Supreme Court of Canada upheld the producers right to obtain and ship railway cars, a right which had been denied by the Canadian Pacific Railway, in this case in 1902.

Current Regulations

Current regulations respecting the application for producer cars were approved by Order-in-Council PC 1976-2072, of August 19, 1976.

In filing an application with the Canadian Grain Commission, a producer nominates a grain company to handle loading documents. The grain company is permitted, under the Primary Elevator Tariff, to charge the producer a maximum of \$100.00 for "administration for producer railway car". The grain company manager, at the specified delivery point, is advised of the approval, and he in turn is responsible for notifying the producer of the date and time of placement of the car in which to complete loading. It is the producer responsibility to:

(a) make arrangements for the preparation of the customary documents accompanying the shipment, and (b) make arrangements with respect to the unloading of the car at the destination point specified in the application.

The provision of the Income Tax Act regarding deferred payment is being construed as only applying to deliveries to primary elevators.

The Commission found throughout its hearings that producers generally found the procedure for ordering producer cars complex, it involved the Canadian Grain Commission, The Canadian Wheat Board, a grain company and the railway. In most cases, a lack of awareness by producers of the mechanics or the procedures involved was evident. Some producers felt that regulations, such as the eight hour loading limitations, not applied to the primary elevator, and the income tax provisions for deferred payment, discriminate against producer cars.

Loadings of grain by producers have not been significant in terms of total marketings in Western Canada. In the five year period, 1971-72 to 1975-76, platform loadings averaged 209 cars per year, or approximately 420 thousand bushels, equal to less than 1/10 of one percent of total producer marketings.

<u>Crop Year</u>	<u>Producer Cars</u>
1971-72	183
1972-73	193
1973-74	181
1974-75	96
1975-76	394

This is a right which the early producers fought to retain. While it is still embodied in statute, producers are frustrated by its application. It should not be allowed to die. The Commission believes that

the system can, without adversely affecting the movement of grain through normal channels, easily handle up to five percent of producer marketings. This would mean approximately 40 million bushels, or 20 thousand cars annually, being loaded directly by producers, resulting in savings, to those producers, of approximately \$4.8 million yearly in elevator handling charges.

The Commission recommends that:

- 1) The Canadian Wheat Board assume total responsibility for a producer car program. Producers would apply to the Canadian Wheat Board for cars, the Board would undertake to have the railway company spot cars, notify the producer, and provide the producer with "for orders" bills of lading. Upon arrival at the Lakehead or West Coast the Board would allocate cars to individual terminals for handling. The Canadian Wheat Board would provide total co-ordination of the program for the producer. The grain companies at the primary delivery point would not enter into the transaction.
- 2) The Canadian Wheat Board should undertake a program to increase the producer's awareness of this program, the availability of producer cars, the procedure for ordering, loading and billing cars, and the producers responsibilities in loading and shipping.
- 3) That changes be made in regulations so that producers have the same amount of "free time" to load cars as do primary elevators.
- 4) That changes be made in the Income Tax Act regulations to allow producers shipping producer cars, the same privileges in respect of income deferment as producers who deliver direct to primary elevators.
- 5) Where a primary elevator at a single elevator point is closed, the siding should remain in place for the spotting of producer cars. The Railway should only be given permission to remove that siding if no producer cars are loaded in the 12 month period following closure of the elevator, or if adequate alternate spotting arrangements are available.

Clinton Ashcroft Link

The Clinton Ashcroft Link between the Canadian National and/or the CP Rail near Ashcroft, and the British Columbia Railway at Clinton, has been a matter of debate for many years. A survey of one proposed route was completed as long ago as February 14th, 1918.

A tentative agreement to construct this link on an equally shared basis, between the Government of Canada and the Government of British Columbia, was reached in July 1973 at the Western Economic Opportunities Conference in Calgary, where it was said by the Minister of Transport:

"We are in full agreement with the Western position regarding the enlargement of port facilities and improving access to those ports, particularly to the Lower Mainland of British Columbia. This will bring enormous benefits for the movement of mineral concentrates, coal, forest products, increased quantities of Prairie Grains, oilseeds and oilseed products.

"The production areas of the West require continuous unhindered access to our international gateways. In recognition of this need for comprehensive improvement to the trunk rail connections, part of the agreement which the Governments of Canada and British Columbia concluded yesterday will ensure the construction of the Ashcroft-Clinton rail link. This will produce benefits for Prairie grain shippers as well as British Columbia resource industries. It will protect the system from the blockages that occur from time to time on CN and CP's canyon routes and it will also provide a further assurance that as traffic grows it will not have to be diverted through the United States."

Since then the present Government of British Columbia has reconsidered the matter, and stated at the Commission hearings in Vancouver, that they would rather spend the funds on higher priority

projects. One of their reasons was that the amount of traffic generated in the British Columbia interior and destined to points in Canada, and the United States, which could utilize this link is not sufficient to warrant its construction at this time. Both Canadian National and CP Rail were opposed to construction of this link.

Some of the reasons put forward to the Commission for the construction of the link were as follows:

1. The undependability of the Fraser Canyon route.

The lines through the canyon have been blocked on numerous occasions due to rock, mud and snow slides. The possibility of the canyon becoming blocked due to the mountain sliding into the Fraser Canyon is very real. In the area between Hells Gate and Hope cracks are developing in the mountain, considerable scaling, cementing and bolting has been done to try to stabilize the mountain.

2. War or other National Emergency:

In the event of war or sabotage the entire Fraser Valley could be easily blocked with explosives. This could close the Canadian National, CP Rail and the Trans-Canada Highway and effectively cut East-West transportation for months.

3. Earth tremors of varying degrees of severity are a possibility.
4. Squamish Terminal:
Grain utilization of the link and the British Columbia Railway could make Squamish a viable terminal port. Interest has been shown in building a terminal at Squamish. This also would relieve some of the traffic through Vancouver.
5. In the event of a serious blockage in the Fraser Canyon the only present Canadian rail route to Vancouver would be via Edmonton, Jasper, and the British Columbia Railway. This route is not physically capable of carrying the extra traffic for a prolonged period of time. As one of the time constraints in building a rail line is the acquisition of a right-of-way, the Commission recommends that this be done immediately, and that the engineering for construction of this link be completed.

In view of the fact that despite what was agreed to at the Western Economic Opportunities Conference, no immediate plans are being formulated to carry out that agreement.

The Commission recommends that;

1. The right-of-way required for the Clinton Ashcroft Link be acquired immediately by the Government of Canada and

the British Columbia Government, as agreed at the Western Economic Opportunities Conference.

2. That the engineering and plans be completed for construction of the linkage so that it could be built quickly in an emergency situation.

The next generation may revert to the wisdom displayed at the Western Economic Opportunities Conference.

The Parallel Rail Lines

Specific instances of rail lines existing relatively close and parallel to one another were frequently mentioned. The more prominent of these were: The Canadian National and CP Rail lines between Saskatoon and Unity; the Canadian National and CP Rail lines from Regina to Moose Jaw; the CP Rail Alberta Central and Canadian National Brazeau Subdivisions; the Northern Alberta Railways Waterway Subdivision and Canadian National Coronado Subdivision from Redwater to Edmonton; as well as the several lines north and west of Brandon and in the Interlake Region in Manitoba.

The Commission was able to rationalize those parallel lines in Category "B", but those in the Basic Network were outside of this Commission's jurisdiction. Nevertheless, the Commission recognizes the merit of the submissions that argued that these are duplications. The railways should study the economics of joint track usage in the Saskatoon to Unity and Moose Jaw to Regina cases.

Electrification

Throughout the hearings there were suggestions that railways should be electrified. The Province of Manitoba, in particular, stressed that electrification be closely studied. It is the province that is in the best position to electrify its transportation lines.

Electrification is widespread in Europe, with 100 percent of the system in Switzerland operated on electricity; 62 percent in Sweden, 60 percent in France and 38 percent in West Germany. Studies carried out in Canada, and the United States, indicate that due to high capital costs electrification becomes an interesting possibility only when traffic densities of over 15 million tons per mile of track per year are attained. If 15 million tons per mile is the threshold for electrification then 20 percent of Canada's rail system carrying 70 percent of all rail traffic would qualify for electrification. The only detailed study on the rail electrification was carried out in 1971-72 by CP Rail. Traffic densities of 30 million gross tons per mile of track per year between Calgary and Vancouver make this a prime candidate for further immediate consideration.*

As well as the savings in fossil energy, electrification has other technical attributes relating to haulage efficiencies.

Canada has concentrated her transportation research in other areas and the slow application of modern technology to the railway

* The Railway Game, by J. Lukasiewicz

mode is evidence that this policy cannot continue if Canada is to meet its transport requirements. Research into the application of electrification of Canadian railways should be undertaken by Transport Canada.

Public Ownership of Railway Roadbeds

Public ownership of the railway roadbed has in the past been put forward as the simplest if not the only way to achieve genuine railway rationalization in Canada. This subject has been debated for many years in Western Canada by various organizations and the provincial governments.

Following the Western Economic Opportunities Conference in Calgary in 1973 a further cost study of this proposal was undertaken, "Roadbed Costs and Cost Relief Options For Canada's Contiguous Railways".*

The benefits and burdens of this concept have not been dealt with by this Commission and would involve an extensive evaluation before any recommendation could be made. The Commission is of the view that nationalization of railway roadbed must involve consideration on a national scale. Canada's railways serve all provinces and to some degree the territories. Any consideration of nationalization must be made at the national level.

As is recommended elsewhere in this report, ownership in the roadbed, following abandonment is to vest in provincial crown.

* P.S. Ross & Partners, MPS Associates Ltd., R.L. Banks & Associates Inc., The M.W. Menzies Group Limited, George H. Borts, (Brown University) and George W. Wilson (Indiana University) March, 1975.

CHAPTER 7

PORTS AND TERMINALS

PORTS AND TERMINALS

Throughout the hearings, producers expressed concern that problems at export grain terminals and ports may have a more detrimental effect on the ability of Canada to meet export opportunities than the prairie system. The Commission examined the facilities and operations at Thunder Bay, Churchill, Prince Rupert, and Vancouver to gain an understanding of possible constraints and opportunities.

It appears to the Commission that there are some evident features which either cause current constraints to the efficient operation of some of the ports or pending problems which can be avoided by taking immediate action. These are the items upon which the Commission makes comment.

Thunder Bay

When the Canadian Pacific Railway joined Canada's prairies to Thunder Bay on Lake Superior in 1882, it immediately began to build a terminal to transfer grain from rail to ship. Christened "The King" a 350 thousand bushel terminal was finished in time to handle the 1884 crop. As the flow of grain from the prairies increased, Canadian Pacific Railways built four more terminals between 1885 and 1902. When the Canadian Northern Railway arrived at the port in 1900, it built a 1,250,000 bushel terminal. Between 1900 and 1930, terminal elevator construction at Thunder Bay continued at a fast pace.

TABLE VII-1 Grain Terminals and Capacities - Thunder Bay, 1900-1976		
Year	Number of Terminals	Storage Capacity (bushels)
1900	5	5,565,000
1910	15	25,700,000
1920	18	49,500,000
1930	26	83,700,000
1976	17	90,400,000

Thunder Bay is the key port in the entire eastward grain handling and transportation system. The operations at Thunder Bay have a direct bearing on the activities and operations of all eastern grain ports. Thunder Bay provides the surge storage capacity and grain cleaning facilities for all grains moved east thereof, either to export or for domestic consumption. Operations at Thunder Bay are of a seasonal nature. Drastically reduced volumes of grain move out of Thunder Bay when navigation on the Great Lakes is closed from approximately late December to early April. There is some movement of grain by rail to the eastern domestic feed market during all months, however, the heavier movement occurs during the winter months when navigation on the lakes is closed.

A large proportion of the grain shipped from Thunder Bay moves by lake vessel to the St. Lawrence ports. Less than 10 percent of Canadian exports through the east coast move directly overseas from Thunder Bay.

TABLE VII-2 Exports of Canadian Grain (thousands of bushels)		
Crop Year	Total of Exports through the East Coast	Exports direct from Thunder Bay
1967-68	158,377	20,750
1968-69	116,661	12,343
1969-70	216,980	10,593
1970-71	377,704	42,231
1971-72	441,168	45,819
1972-73	408,037	36,746
1973-74	291,376	20,179
1974-75	300,105	31,645

Historically, Thunder Bay has been classified the "Canadian Lakehead", the western terminus of the St. Lawrence - Great Lakes Seaway. Thunder Bay serves as the junction point between the overland transportation system of Western Canada and the water transportation system of Eastern Canada. Naturally, this location has led to the development of terminal elevators for the transloading of grain from rail to ship and is currently gaining an importance as a transloading point for coal and petroleum industry products as well.

The importance of Thunder Bay to Western Canada's grain handling is indicated by virtue of the fact that the 17 terminals have a capacity of some 90.3 million bushels of Canada's total 237 million bushel terminal capacity on water. Thunder Bay is widely known as one of the greatest grain handling ports in the world. The port is capable of accommodating both lakera and ocean going vessels and handles approximately two-thirds of Western Canada's grain shipment or some 475 million bushels annually over the past decade.

Although Thunder Bay has adequate capacity to handle all of the grain which it is currently being called upon to handle, changing circumstances will very soon affect the efficiency of this port unless remedial action is taken.

These circumstances are:

- 1) silting in the river terminal areas and in the slips and harbour generally;
- 2) the increasing size and draft of the grain carriers;
- 3) the increasing rail traffic caused by coal, potash, iron ore and wood product haulage;
- 4) obsolescence of some terminals in view of changing circumstances.

The terminals on the Kaministiquia River are being phased out of operation largely due to environmental regulations and pressures which have prevented economical dredging. Even with this reduction in capacity, the port will continue to be able to handle its share of the grain without difficulty. However, the reduced capacity does necessitate a more rapid turnover.

The silting problem is such that it is currently often necessary to shift vessels several times to terminals or slips with greater draft in order to fully load out. This process is effectively managed by the Lake Shippers Association; however, there is a limit to the extent to which the problem can be alleviated in this manner. Although the major concern is with the terminals remaining on the river, silting is also a problem in some of the slips. Part of the silting problem is due to the fact that environmental interests will not allow the dumping of contaminated silt anywhere else in the lake and difficulty is being experienced in locating inland dumping areas. There has been no significant dredging for three years. This is becoming a major concern and action must be taken soon before serious limitations are imposed on the operating efficiency of the port.

The servicing of various terminals by the two railways is opposite or in direct conflict with the deliveries by the railways. That is, currently some 54 percent of the grain delivered to Thunder Bay is picked up in the country by CP Rail while terminals serviced by CP Rail amount to some 43 percent. Likewise the opposite holds true for Canadian National.

The pooling of board grains has helped the switching and co-ordination problem considerably, but the possibility of a slight change in the servicing

of terminals by the railways to reflect country pick-ups appears to be a course which should be examined in the interests of enhanced efficiency.

Another area of concern is the co-ordination of unloads and arrivals. With the railway operating seven days per week and the terminals five, a good deal of efforts is required to keep the system operating smoothly. Much has been accomplished in this regard by pushing for heavy unloads early in the week (1,400 or so cars per day) and lighter unloads (1,000 or so) toward the end of the week. The car turn around time has thereby been reduced.

The Grain Movement Co-ordinators of the Canadian Transport Commission must be given credit for the innovation and dedication they are applying in obtaining smooth function of the operations. Operating with little authority but maximum tact, they have become an essential component to the efficient operation of the port.

The increased use of rail for coal movement to the new terminal at Thunder Bay along with the other items mentioned will tend to increase rail congestion in the port area. The fact that all CP Rail through traffic must pass through this port area is a contributing factor. A CP Rail bypass running from Kaministiquia to Navilus is required.

The labor-management relations at Thunder Bay in recent years have been good. It is encouraging to note that unions are working toward common contract expiry dates to further improve working arrangements.

Throughout the Commission hearings, the good capacity and performance at Thunder Bay appeared to be taken for granted. It is obvious to the Commission upon examination of the Thunder Bay port and discussions with local officials that immediate maintenance in the form of dredging

is essential to the continued performance of this port as a grain handling facility.

The Commission recommends:

- That dredging at Thunder Bay be resumed immediately;
- That terminal switching at the Thunder Bay terminals be altered so that the switching by each railway closely parallels the country origins of each;
- That a main line CP Rail bypass be constructed for through traffic at Thunder Bay;
- The common gallery concept for the Richardson, Saskatchewan Wheat Pool and United Grain Growers terminals has merit and we recommend that it be implemented;
- The Canadian Wheat Board should have the responsibility for co-ordinating the logistics for movement of all grain through Thunder Bay. The co-ordinator at Thunder Bay should be an official of the Canadian Wheat Board and must at all times on a daily basis have access to the necessary information as to train operations and vessel arrivals to effect and enforce this co-ordination function;
- That unions be encouraged to continue their quest for common contract expiry dates.

Port of Churchill

The Port of Churchill is located in the estuary of the Churchill River on the western shore of Hudson Bay approximately 600 miles north of Winnipeg. This port provides direct access to the sea from the prairie provinces.

This area of Western Canada is still largely viewed as one of the last frontiers; it was in effect one of the first areas of Western

Canada to serve as a permanent base for Europeans having had a fort established in this location in 1689. The port served as the gateway to what is now the prairie provinces for close to 200 years. In 1813, a party of Selkirk settlers were mistakenly landed at Churchill where they spent the winter before proceeding to York Factory and up the Nelson River to Lake Winnipeg. This Hudson Bay route flourished until the building of the Canadian Pacific Railway. Western farmers were cognizant of the mileage which could be saved by the shipment of grain over this route and late in the last century began pressuring for a railway to the "Prairie Port". In 1885, 1897, and 1903, expeditions were sent to investigate a rail route. The Churchill townsite was surveyed in 1908, the same year that Sir Wilfrid Laurier promised a Hudson Bay Railway. The line was constructed from Hudson Bay, Saskatchewan to The Pas, Manitoba, between 1906 and 1910, by the Canadian Northern Railway.

The first terminus of the rail to be partially developed was at Port Nelson.

Construction of the railway commenced in 1911 as a Dominion Government project and by 1916 had reached Kettle Rapids. It then came to a halt due to the war and did not resume again until 1926.

In 1927, Churchill was designated for the terminus. The railway reached Churchill in 1929. The line was originally laid with 80 pound steel, but is now being upgraded to 100 pounds. This work is expected to be completed by 1978.

Construction of a grain terminal began in the spring of 1930 and two cargoes of grain were shipped out in 1931. In 1937, management and operation of the elevator was turned over to the National Harbours Board. The original capacity of the terminal elevator was 2.5 million bushels. This was increased to five million bushels in 1954-55.

The navigation season is restricted to approximately three months, from mid-July to mid-October. The main traffic handled is grain, although there has been some inbound traffic and the port is used as a staging area for some northern supply. In 1975, 90 thousand tons of sulphur originating in Alberta were shipped through the port.

TABLE VII-3			
Churchill - Grain Shipments 1966-67 to 1975-76*			
(thousands of bushels)			
Crop Year	Wheat	Barley	Total
1966-67	21,031	--	21,031
1967-68	21,543	--	21,543
1968-69	22,582	--	22,582
1969-70	21,967	--	21,967
1970-71	23,402	--	23,402
1971-72	20,571	4,918	25,489
1972-73	16,279	8,856	25,272
1973-74	9,738	9,048	18,786
1974-75	551	22,186	22,737
1975-76	--	22,710	22,710
1976-77	14,083	14,307	28,390
* Canadian Wheat Board Annual Reports			

The proximity of the Port of Churchill to the producers of Northern Manitoba and Saskatchewan had led prairie people to push for greater utilization of the port. The Hudson Bay Route Association with broad membership and support from provincial and local government groups and others has been instrumental in promoting the greater use of Churchill.

The port is served only by the Canadian National Railway. There is no interchange of grain traffic from CP Rail lines although there are physical interchange connections at several locations where this could be done.

A study was carried out jointly by the Canadian National Railway and CP Rail to determine if improvements in the efficiency of moving grain through Churchill could be effected. The study examined two measures which could be undertaken to reduce net mileage.

- 1) Gathering grain from nearby CP Rail as well as Canadian National lines;
- 2) Gathering all of the grain required for Churchill from those areas which would yield the greatest net mileage advantage compared to shipping to other ports.

According to the railways, the study indicated that savings effected by adopting either practice would be insignificant. These results and indeed the validity of the study are disputed by several interest groups. They contend that the use of 1974-75 as a base year was unfortunate in that the shipments were entirely barley and were therefore not representative. They also say that the first ship did not arrive until late August, 1975, thereby missing one month of shipping.

Besides the concern expressed by the railways about the possibility of improving the effectiveness of Churchill by changing grain pick up, other organizations such as the Dominion Marine Association stated strongly that Churchill utilization had reached its limit and that funds should be directed elsewhere to improve the efficiency of Western Canada's grain shipment.

The arguments about the virtues and difficulties associated with Churchill grain shipments are likely to continue for some time.

The Commission wishes to point out that:

- 1) That Canadian National Railway Hudson Bay line is in place; it is good and by 1978 will be capable of accommodating 100 ton hopper cars;
- 2) The Churchill terminal with five million bushels capacity is in good condition, but gallery belt capacity could be improved;
- 3) The Churchill elevator with five million bushels capacity handled over 28 million bushels of grain in the 1976 season, a handling to capacity ratio of 5.6:1 in the limited shipping period of three months;
- 4) Improved navigation technology can reduce the risk of shipping problems caused by ice;
- 5) Any increase in seaway tolls will improve the relative position of Churchill of a grain port;
- 6) Churchill does provide an alternate route for five percent of Canada's grain export;
- 7) In the fall of 1976, the Canadian Wheat Board sold 18 million bushels of wheat for delivery through Churchill in the 1977 season. This type of forward selling permits timely filling of the terminal with clean grain prior to the opening of the shipping season;

- 8) A Commission review of the Canadian National - CP Rail study reveals some discrepancies which when removed, finds that a saving of 762 thousand loaded car miles is possible through the development of two interchanges, one at each of Tisdale and Yorkton.

Constraints

1. Cargo and hull insurance is available only for ships which pass Cape Chidley no earlier than July 23 and clear Churchill by October 20 with additional premiums charged after October 15. This coverage has not changed since 1956 even though navigation technology has improved tremendously.
2. On the basis of 160 car trains, which Canadian National currently handles, and assuming no delay at the port or elevator, in a 105 day season Canadian National Railways have calculated they would expect to be able to deliver approximately 34 million bushels. According to Canadian National Railways, to go beyond this level would require an additional siding on each of the Herchmer and Thicket subdivisions, and a long track at Churchill. According to the Port of Churchill Development Board, this, coupled with the use of hopper cars, increases the rail capacity to 55.5 million bushels annually.
3. The handling capacity of the terminal elevator is rated by the Port of Churchill Development Board at 39.7 million bushels on a single shift operation basis, 87 days per season and 52.9 million bushels on a two shift operation. These ratings assume a portion of the grain received is precleaned. Total precleaning will enhance the capacity.

4. The practice has been to limit the type and variety of grains or grades to one or at the most two. This is a limiting factor in servicing all ships which might call at the port. Churchill has in the past lacked this ability to service ships requiring numerous grades or varieties of grain and thus has hindered Churchill's ability to increase its throughput.
5. The terminal elevator has three berths with 32 foot clearance at low tide. This is being dredged to 35 feet.
6. The gallery conveyor capacity is 50 thousand bushels per hour but with two additional conveyor belts, 100 thousand bushels per hour could be handled.
7. The current administrative framework is such that there is very little chance of Churchill competing with other ports which are oriented to Eastern Shipping. Representations for consideration by the National Harbors Board must be made through the same persons as those responsible for Montreal and Thunder Bay. As such, Churchill is seen to get short shift. With practically no local autonomy or authority, this port has not enjoyed the consideration which it commands.

The Commission is convinced that the increased utilization of the port of Churchill is, in the long term, in the best interests of Canadian trade. This applies particularly to Western Canadian grain, but could also be important to the export of sulphur, potash and other commodities, and to future imports.

As is often stated in this report, the nature of Canada's geography and the location of renewable and non-renewable resources relative to the areas of consumption is such that every effort must be made to ensure that our transportation resources are employed in the most effective and efficient manner possible.

The significant increases projected for the movement of coal from Western Alberta to Thunder Bay over both Canadian National and CP Rail and beyond is about to burden the rail and seaway transportation corridor. The anticipated increases in transport of sulphur, iron ore and potash render it incumbent upon Canada to use every element of its total transport system to the greatest advantage. The port of Churchill and the railway to Churchill are in place. These facilities with slight modification and normal maintenance are capable of performing an increasingly important function in the overall system.

One of the constraints alluded to in discussion regarding this port is the insurance factor. The record of ice related accidents is insignificant. Concerns about the danger of the use of this route should be discounted. A recent study carried out by William Zeweniuk* bears out these facts.

The insurance premiums, while high, do not discourage all Churchill movement as they do not take away all the financial incentive

* "Marine Insurance and its effects on the movement of grain through Churchill", William Zeweniuk, Natural Resource Institute, University of Manitoba, 1977.

Port Churchill provides.

According to evidence submitted to the Commission, new technology involving satellite information and radar has not been utilized to permit an extension to the insurance season. The basis for establishing insurance was last set in 1956. This was prior to the advent of the sophisticated surveillance technology provided by satellites. Satellites combined with back-up aircraft overflights, and ship board radar accurately pinpoint ice obstacles. Ships can be equipped with ultra high frequency transmitter receivers which will provide them with instant communication with the surveillance mechanisms at Prince Albert.

The National Reserach Council has published a study* indicating that the Churchill shipping season could be extended by 24 days on the average. Even this extension which some consider to be modest in the light of current technology represents an increase of 27 percent in the season. The Province of Manitoba Royal Commission Inquiry (MAURO) into Northern Transportation states the "close" of the season could be extended by 13 to 28 days.

The study carried out by William Zeweniuk of the Natural Resources Institute, University of Manitoba, states that the season can safely be extended to July 20th through November 10th in normal seasons, and beyond that in good ones. "Good seasons" are identifiable three months in advance with a good degree of probability.

* "Feasibility of extending Navigation Season at Churchill Harbour", T.M. Dick.

From all of the evidence submitted, it does not appear that Churchill has been truly "tried" by the total grain handling and transportation interests. The Commission is confident that the Port of Churchill will increase in importance as a grain export port if an effort is made to fully utilize it.

The harbour itself requires more dredging. The entrance to the harbour is deserving of attention.

There has been discussion, according to the Port of Churchill Development Board, to the effect that an expansion of terminal capacity at Churchill is a possibility. With five million bushels current capacity and the requirement for working space of 1 to 1.5 million bushels, it does not appear efficient to use Churchill for cleaning grain. Rather, the grain should be cleaned inland before shipment to Churchill. The following positive results could thus be attained.

- 1) With clean grain only moving through Churchill a greater variety of grains could be shipped through the port. The space currently used for working space could be used for other grains or grades thereby accommodating a greater variety of carriers. It has been reported that the lack of ability of Churchill to carry numerous grades of grain has hindered that port's ability to increase throughput.
- 2) The throughput of the terminal elevator could be increased by approximately 25 percent due to the clean grain factor alone.
- 3) The unnecessary haulage of screenings would be eliminated. There is no market for screenings at Churchill. Screenings must be back-hauled great distances to the prairies or accumulated and shipped by vessel load to the Atlantic or St. Lawrence ports.

- 4) By utilizing the Churchill grain terminal for clean grain only, it is estimated that 55 to 60 million bushels annually could readily be put through this port.

To provide for this type of throughput, some institutional and structural changes would be required to the system. The port changes have already been mentioned, i.e. improved gallery; dredging; harbour protection; installation of some passing tracks.

Other changes are required to provide clean grain in sufficient quantity to satisfy the 55 to 60 million bushel requirement. According to studies carried out by the Commission, more than this quantity of grain is available from Canadian National blocks 11, 15, 17, 21, 23, 25, 27, 29 and 31, and CP Rail blocks 73, 74 and 75. This total area has an estimated production of 240 million bushels. Assuming that no cleaning or drying would take place at Churchill, it appears logical that the Saskatoon government terminal be used to a maximum. This Canadian government elevator has been grossly underutilized. The escalation in stop-off charges has inhibited recent use of the government elevators as a back up to terminal stocks. This elevator with a capacity of 5.5 million bushels would permit Churchill to commence the shipping season with 11.0 million bushels of clean grain in position. The Government elevator at Saskatoon should be capable of providing 30 million bushels during the season.

A Canadian Government Elevator at Yorkton

Another government elevator capable of shipping 25 to 30 million bushels is a necessity. The Commission study referred to above concludes

that grain should be gathered from both Canadian National and CP Rail areas which provide the greatest haul advantage in servicing Churchill. The stop-off charge must be eliminated. It is recommended by the Commission that most, if not all, of the grain destined for cleaning prior to being forwarded to Churchill will be delivered to a government elevator by rail. It is necessary that this additional capacity be located in an area served by both railways. It is also desirable that such a facility be in an "en-route" location relative to the gathering hinterlands and the port. A third criterium for location of this additional facility would, in the interests of screenings utilization, be in the vicinity of a livestock production area. Yorkton, Saskatchewan, meets these three criteria. Yorkton is strategically located, as it is serviced by the Canadian National Yorkton and CP Rail Wynyard subdivisions, both heavy grain lines, and is adjacent to the Canadian National Qu'Appelle, Watrous and Rivers Subdivisions, and CP Rail Sutherland and Tisdale Subdivisions. Yorkton also has a feed manufacturing plant which could utilize screenings produced locally.

Screenings cleaned from grain at either Saskatoon or Yorkton have an opportunity to move into a variety of markets. These market opportunities are not available at Churchill. Inland screenings can first move into the local market; secondly, to other feed deficient areas in the prairies; thirdly, to domestic markets in Eastern Canada, or to export markets through Thunder Bay or Vancouver.

Currently, to service Churchill, it is necessary for the Canadian Wheat Board to hold back callable stocks on the farms, in railway

rolling stock and in primary elevators on Canadian National lines, which often creates congested elevators and the inequitable application of delivery quotas pending the opening of Churchill.

Thus, a stress is placed on all segments of the industry from farm to elevator companies, to Wheat Board operations. It is the opinion of the Commission that this stress could be eliminated if the Government elevator at Saskatoon and the one proposed for Yorkton be fully utilized.

The Commission recommends:

- The Railway stop-off charge for in-transit storage at inland government elevators be eliminated.
- That the Canadian Government elevator at Saskatoon be fully utilized in the cleaning, storage and shipment of grain to Churchill.
- Rates be established from all CP Rail points in the area serving Churchill. These rates should be distance related and comparable to distance related grain rates on the Canadian National Railways. The railways be required to interchange cars for Churchill at common interchange points.
- A new Canadian Government elevator be built at Yorkton capable of handling 25 to 30 million bushels per year.
- That the Canadian Government work with local authorities in increasing the insurance season on grain carriers between Cape Chidley and Churchill and readjust the rate reflecting contemporary conditions.
- The suggested new system for the management of Canadian ports will enhance the influence of local authorities in the development of the Port of Churchill and the Commission supports early passage and implimentation of the legislation.

Pacific Coast Ports

Export grain from primary elevators destined to the West Coast moves through terminal elevators at one of two ports - Vancouver or Prince Rupert. There are four terminals in Vancouver with a total capacity of 25.0 million bushels; one in Prince Rupert with a capacity of 2.2 million bushels. In order to facilitate increased grain exports, the Canadian Wheat Board announced in April, 1976, an incentive program to encourage the construction of up to 14 million bushels of additional terminal capacity at West Coast ports.

The two main functions of these terminal elevators are the transferring of grain from rail cars to vessels, and the cleaning of grain while in the terminal.

1. The Port of Vancouver

Although the Canadian Pacific's completion through to Vancouver in 1885 opened a new route to world markets for prairie grain production, only limited shipments left the port during the early years. The earliest recorded shipments indicate that 50 thousand bushels of bagged wheat were shipped to Liverpool via Cape Horn in 1900. Later in that same year, another 50 thousand bushels were shipped to China.

The completion of the Panama Canal in 1914 saw construction of the first major terminal at the West Coast. Completed in 1916, the Federal Government terminal had a capacity of 1.2 million bushels. By 1922, exports from Vancouver reached 14 million bushels, 10 million bushels going to the United Kingdom through the Panama Canal.

a) Saskatchewan Wheat Pool

The 5,472,000 bushel capacity elevator is located on the north shore of Burrard Inlet. This terminal elevator can handle all types of cereal grains and oil seeds that are moved through the West Coast. The majority of the durum wheat is directed to this terminal because of the cleaning equipment available. Saskatchewan Wheat Pool is proceeding with plans for a three million bushel expansion of its terminal, along with corresponding improvements to the workhouse and sidings.

Canadian National provides rail service to terminals on the north shore. CP Rail cars move from Coquitlam to the CP Rail - Canadian National interchange at Sapperton, located on the Burlington Northern Railway line and on to the north shore. CP Rail empty cars are returned by Canadian National to Sapperton and are picked up by CP Rail. British Columbia Railways traffic destined to Saskatchewan Wheat Pool is interchanged at the British Columbia Railway-Canadian National Railway interchange located just east of the First Narrows Bridge.

b) Alberta Wheat Pool

This elevator is located on the south shore of Burrard Inlet and has a present capacity of 7,300,000 bushels. It is well equipped with trackage for both box cars and hoppers.

Only the CP Rail has access to Alberta Wheat Pool and CP Rail grain moves from Coquitlam westward to "K" yard located beside the terminal. Canadian National Railway cars for Alberta Wheat Pool are interchanged at the yards at Campbell, due west of the terminal and are

handled by CP Rail to and from this point. There presently is not a substantial amount of British Columbia Railway grain destined to Alberta Wheat Pool which required movement over the Canadian National Railway to Willingdon Junction, Burlington Northern Railway to Sapperton, CP Rail to Coquitlam and thence CP Rail to Alberta Wheat Pool.

c) Pacific Elevator Ltd.

These two terminal elevators are also located on the south shore and have a large annex between them which can be handled by either elevator. The combined storage capacity of this complex is 7,111,500 bushels. These facilities are owned by the Alberta and Saskatchewan Wheat Pools who practice plant specialization to a limited degree by directing certain grains to particular elevators.

Both Canadian National and CP Rail have access to these elevators which have limited trackage for loaded and empty cars.

d) United Grain Growers

This 3,645,000 bushel capacity terminal is located on the south shore. On-site trackage is limited, and the need to have empty cars removed from the service tracks before loaded ones can be placed requires the railways to switch frequently in order to keep the terminal in operation. Adjacent property has become available which will enable the expansion of trackage and storage capacity.

Both Canadian National and CP Rail service the United Grain Growers Terminal.

e) Burrard Terminals Ltd.

The terminal is presently out of use due to an explosion and

fire which occurred in the fall of 1975. Located on the north shore of Burrard Inlet, the 1,500,000 bushel terminal was used quite extensively for specialty grains. The company has announced plans to rebuild the workhouse and expand plant capacity.

The Vancouver hearing in October 1976 concentrated in part, on the situation and difficulties attending the carriage of grain to the several terminals on both sides of Burrard Inlet and the loading of ships carrying grain to overseas customers. Virtually, all grain exported from the West Coast is moved through the Port of Vancouver. The operation of the Port has been severely criticized. The Government of British Columbia in its brief to the Commission said:

"The interswitching rules and interswitching rates used today are archaic. They date back to World War I. They must be updated whether we have a terminal railway or not".

Many of the submissions made to the Commission at the Vancouver hearing reiterated the complaint and stressed that things had to be improved.

A few submissions advocated the creation of a Vancouver Terminal rail switching facility independent of the five rail lines operating in the Port. It was argued that the idea had merit and that there exists precedents for a facility of this kind at New Orleans, Portland and other grain export points.

In reviewing the Port of Vancouver situation, Mr Fred Spoke, Manager of the Port of Vancouver said:

"We are not convinced that a port terminal railway jurisdiction is necessarily the answer to its improvement. Ideally, we can envisage a system of common use of the railway infrastructure around the port, by all existing railway organizations, with the rail traffic to and from their destination points in the port being regulated

from one central control. The parallel with air traffic into and out of major airports being regulated through the airport control tower comes to mind."

The terminal rail concept was considered by the Commission along with other alternatives, some of which were:

- 1) Leave matters as they are;
- 2) Entrust the entire grain switching operation to either CP Rail or Canadian National;
- 3) Expand the use of joint running rights;
- 4) Appoint a coordinator with specific powers to control the movement of grain cars to the several terminals.

-- A Terminal Rail Authority

The terminal rail idea found no support from any of the five rail-ways operating in the area. The spokesman for the Canadian Railway Labour Association said that his association was strongly adverse to the proposal. He urged that adoption of the idea would create grave labour problems having regard to the various labour agreements with the rail companies.

It was very evident from what was told to the Commission that there must be some improvements, matters cannot continue as they are. The situation may be having a damaging effect on sales to foreign buyers. This is illustrated in a message sent to the Canadian Wheat Board and others from the Steamship Agents at Vancouver for the People's Republic of China in February, 1977, which reads:

"As steamship agents representing the People's Republic of China in Western Canada, we wish to voice our concern with respect to the forthcoming grain movement to China.

Over the past few years our principals have been subjected to enormous delays in the loading of their grain vessels at Vancouver. Many delays, particularly

during the latter half of 1974 and early 1975 were caused by labour unrest and strikes. However, many delays were caused by the direct result of insufficient grain being available, elevators overstocked with grades of wheat other than those required under the contract, grain damp, grain in unclean condition, and poor railcar deliveries. Many reasons and causes are claimed, of which some are no doubt quite valid, but it is of little consolation to a customer when his vessels are waiting idle at anchorage for days and weeks.

These numerous problems have not only placed the Canadian export industry in a very embarrassing light with potential buyers of our products, but has in the past few years cost the Canadian taxpayer untold millions of dollars in ship demurrage and further losses in trade.

It is our understanding that Canada is committed to sales contracts this year with the Chinese totalling 2,250,000 long tons of which 1,350,000 long tons are to be moved between February and June. It is our sincere hope that this commitment will be met without the habitual problems and delays experienced in the past. And we and our principals trust you will exert every effort to accomplish the successful delivery of this program."

Mr. Spoke in his evidence stated:

"We find it essential that the railways and street-ends on the north shore of Burrard Inlet be separated in grade without delay. This will necessitate construction of overpasses and/or tunnels at a number of these intersections which have already been identified, in a study recently completed under the auspices of WESTAC."

The Honourable Jack Davis, Minister of Transport for the Province of British Columbia said:

"Cooperation is certainly preferable to the creation of another railway entity. We don't need another bureaucracy imposing its will, its added cost on our transportation network here on the Coast. We don't need it to route unit trains to Roberts Bank.

We don't need it to run unit trains onto the North Shore of Burrard Inlet either, so the case for a terminal railway rests on the assumption that the five major railways won't

work closely together on the interswitching of mixed train movement in metropolitan areas.

There are other courses we can pursue. One is the setting up of a task force like that established a few years ago in St. Louis, Missouri. There, representatives of management, labour, and several levels of government, worked together to produce a more effective system. This all interests approach recommends itself to us. It appeals to us also because it would bring organized labour into the picture here in Vancouver.

WESTAC, the Western Transportation Advisory Council, which was set up several years ago to perform this and similar tasks, is well placed to take on this job. It's already an organization which includes government, major carriers, shippers, management and labour. It has carried out a number of studies, including the need for grade separations and methods of improving grade handling in the port area. Your Commission may see fit to name WESTAC as the agency best able to co-ordinate a task force, a la the St. Louis experience which can smooth out our rail operations in the terminal area."

In the light of the foregoing, the Commission agrees that a terminal switching authority is not the solution for the Port of Vancouver difficulty.

Neither Canadian National nor CP Rail saw merit in the idea of entrusting the entire grain switching operation to one or other of these companies.

However, as stated by the Honourable Mr. Davis, the concept of co-operation among all the elements involved in making the Port of Vancouver function efficiently seems to present the best possibility for improved operation. The creation of a task force recommended by Mr. Davis along the lines formulated in St. Louis has great merit. It brings labour fully into the picture, for without the co-operation

of the labour unions, no plan or operation can achieve the goals necessary to make Vancouver the grain export port it must be, if Canada is to maintain its place as an exporter of grain.

The Commission accordingly recommends the creation of a task force to co-ordinate rail operations in the Port of Vancouver and that WESTAC be engaged to structure such a task force modelled, as far as is practical, on the St. Louis operation.

-- A Controller with Power

There is now a co-ordinator who directs the railways in placing cars loaded with grain in the terminals in some equalizing sequence. He has been doing an excellent job in a difficult situation but lacks the power to enforce his directions. Matters cannot be left to the persuasive powers of an employee of Canadian Transport Commission as is now the case.

The coordinator should have the authority to allocate and direct grain cars to the terminals he selects and his orders should be carried out expeditiously and without fail by the railways under pain of substantial penalties. This coordinator would better fulfill his function if he was an official of the Canadian Wheat Board with whom he would be in constant communication and direction insofar as allocating grain cars to the terminal that the Wheat Board is at any given time in need of. The Canadian Wheat Board should have the responsibility for coordinating the logistics for movement of all grain through the West Coast. The coordinator at Vancouver must at all times, on a daily basis, have

access to the necessary information and data as to train operations and vessel arrivals to effect and enforce this coordination function.

It is mandatory that the Wheat Board should take a more prominent and aggressive role in the handling and transportation of grain in Canada and we return to this subject in our discussion of the ports of Prince Rupert.

-- The Fraser River Bridge

An incongruous situation exists in regard to the grain traffic which must cross the Fraser River Bridge to reach terminals on both sides of Burrard Inlet. This is a Department of Public Works bridge, and is a virtual bottleneck for Canadian National traffic going to the grain terminals. Track improvements are in progress by Canadian National and Burlington Northern but will be ineffectual as long as the bridge has only a single track and is remotely controlled. The dispatcher who controls the movement of trains over the bridge is an employee of Burlington Northern based in Seattle. That company said that there was an assistant to the dispatcher located in the Vancouver yard of Burlington Northern and it was this person who controlled the operation. However, in an on-site inspection of the traffic routing through the port area, one of the Commissioners found that the train he was monitoring had to communicate with the dispatcher in Seattle for leave to cross the bridge. It appears that Burlington Northern traffic has precedence over this bridge. The resident assistant said he had to get his instructions from Seattle. It is not a case of being nationalistic, but

of efficiency that the Commission recommends that control of traffic over this Government owned bridge be in the hands of Canadian National in Vancouver.

-- The Gap British Columbia Railway to Burlington Northern

There is another traffic arrangement in the port which must be changed. British Columbia Railway brings traffic from its railway to the North Shore of Burrard Inlet. The greater share of this traffic is lumber destined for the Burlington Northern on the south side of the inlet for the United States market. There is no direct connection between British Columbia Railway and Burlington Northern but a six mile gap. This gap has to date been bridged by what is called a 'hook and haul' operation. Canadian National hooks onto British Columbia Railway cars and hauls them to where they are taken over by Burlington Northern. Canadian National charges \$40 per car for this service.

In the summer of 1976, the United States Inter-state Commerce Commission authorized an increase in lumber freight rates. Burlington Northern refused to put the increase into effect although Canadian National and CP Rail did so in Canada. British Columbia Railway went along with Burlington National and refused to make the increase. Canadian National was insisting that British Columbia Railway should do so, and to put pressure on both Burlington National and British Columbia Railway, raised the 'hook and haul' charge to \$100 a car, purporting to act under section 268(2) of the Railway Act, but contrary to 269(4), and exacted that charge until British Columbia Rail and Burlington National capitulated and came into line. After this, Canadian National reduced

the charge to the previous \$40 a car. This type of economic blackmail cannot be countenanced. British Columbia Railway is far too important to the lumber industry of British Columbia and to the Province's hinterland to be left to the mercy of such a competitor. It is a matter of regret that action of this kind can be done without the prior approval of the Canadian Transport Commission.

The Commission accordingly recommends that British Columbia Railway be given running rights over Canadian National from the southern terminus of British Columbia Railway to the points where its trains are taken over by Burlington National. The Canadian Transport Commission should impose equitable terms and conditions for these running rights in pursuance of the powers conferred to it under the Railway Act and The National Transportation Act.

-- Future Expansion

The time may be fast approaching when serious consideration will have to be given to the view that expansion of port grain terminal facilities should be located other than on Burrard Inlet. The whole inlet area is becoming congested with no room for rail expansion to accommodate solid trains of 125 cars. There are also pronounced environmental objections being raised to the proposed rebuilding of Burrard Terminals and to the expansion of the Saskatchewan Wheat Pool terminal. These objections were not brought forward at the Vancouver hearing, but are now surfacing, being brought to the municipal authorities.

-- Labour in the Port

The grain export operation in Vancouver resembles railroading in that it should be by and large a continuous operation.

The railways do not stop operations on weekends, or holidays or at night. Any segment of the whole grain movement from unloading into the terminals to loading into the vessels, which comes to a halt necessarily slows down or stops the entire operation.

The ideal situation would be that all segments of the movement should, when necessary, be prepared to work continuously. Most of the Union employees in the several bargaining units are prepared to do this and actually do so. Negotiations to make the practice universal ought to be vigorously pursued.

Naturally this will involve overtime and other shift payments, but would not interfere with the five-day work week for employees. However, having regard to the importance of the operation in the maintenance of Canada's good name and reliability as a grain exporter and the excessive costs caused by delays, including demurrage paid to vessels, this extra for overtime would be money well spent.

The Commission recommends that the task force which it advocates be structured by WESTAC should make this continuous operation a prime target. The Commission also recommends that recommendations 18, 19 and 20 of the Report of the Honourable Mr. Justice E.D. Bayda, dated July 22, 1975 which read:

- Recommendation 18

"There should be convened, immediately, a meeting of the senior executive officers of those unions (excluding the railway unions) whose members engage in the grain handling industry (see Finding #13) in the Vancouver Port area with a view to commencing discussions ultimately leading to an agreement by those unions to bargain jointly."

- Recommendation #19

"There should be convened, immediately, a meeting of senior management personnel of the terminal elevators and those companies (excluding railways) who are engaged in the grain handling industry (see Finding #13) in the Vancouver Port area and of senior officials of Treasury Board with a view to commencing discussions ultimately leading to an agreement by those employers to bargain jointly."

- Recommendation #20

"If joint bargaining does not ensue within the next year then legislation should be passed to provide for a common date (in any year) on which all collective agreements between employers and employees who are directly involved in the movement of grain through the Vancouver port will expire."

should be an integral part of the study by WESTAC with a view to achieving the objectives which these recommendations envisage. The time frame which these recommendations envisaged has elapsed, however, the procedures they suggest are as valid today as when they were proposed by Mr. Justice Boyda.

2. Squamish

There is no doubt that the Port of Squamish has the potential of being an efficient grain exporting port. However, at this time, its location impedes development. The only grain carried directly to or through Squamish is grain from the Peace River Block in Northeastern British Columbia or on occasions when the Canadian National line through the Fraser Valley is out of commission and trains from Edmonton are diverted on to British Columbia Railway at Prince George. The Commission deals elsewhere with the suggested Ashcroft-Clinton cut-off. If and when this link is established between the Canadian National, CP Rail and British Columbia Railway, the potentialities of Squamish may be realized. The existence of this nature favoured port may ultimately be a decisive

factor in the construction of the Ashcroft-Clinton link.

Congestion on Burrard Inlet and environmental considerations may compel the establishment of a modern grain export terminal outside Vancouver, in which case Squamish could well be the first choice.

3. Prince Rupert

There are advantages to the Port of Prince Rupert that have not been fully developed or utilized.

It is 500 miles closer to the Pacific rim ports than Vancouver. It is on a direct rail line from Edmonton. It is an all year port. The Canadian National rail line is capable of carrying fully loaded 100-ton hopper cars. The Government elevator at Edmonton should be used as a surge facility with clean grain ready for shipment to Prince Rupert as needed.

It stands to serve as the nearest port to the Peace River Block, in both Northern British Columbia and Northern Alberta, when British Columbia Railway is linked with the rail lines which now serve, and will be constructed to serve, the Peace River area in both provinces. The potentialities of the Peace River Block are set out in Chapter 4 dealing with the recommendation for a development department of Canadian National to serve Northern Alberta.

The potential of Prince Rupert will not be achieved until the present terminal is enlarged and fully modernized and then only if the operators of the terminal use it actively as an export facility and not as a storage-oriented unit to be activated when Vancouver is congested or out of action for one cause or another.

The misuse of Prince Rupert as an export terminal is illustrated in a communication, from the Operations Manager of North Pacific Shipping Company Ltd., dated February 17, 1977, which reads in part:

"Earlier this month I planned, together with the CWB locally, to schedule 3 and possibly 4 vessels to load at Prince Rupert. However, a prime example of mismanagement by the CWB has resulted in only 2 vessels being actually able to load in February at Prince Rupert. The following vessels were originally supposed to have loaded at Prince Rupert:

Gui Hai - which arrived Prince Rupert
January 27th, 1977

Aegean Sea - which arrived Prince Rupert
February 11, 1977

Chukchi Sea - ETA Coast February 19, 1977

Koro Sea - original ETA February 28th, 1977

For your interest, prior to her arrival on January 27, 1977, it was expected by the elevator in Prince Rupert and the CWB in Vancouver that Gai Hai would sail latest January 31, 1977, therefore leaving ample time for building of stock to handle the next vessel, Aegean Sea ETA February 11th, 1977. You will be surprised to note that the Gui Hai at this time of writing is still sitting at the grain elevator at Prince Rupert, but is scheduled to sail at 1300 hours today. The problem was that almost 100% of the grain for this vessel arrived at Prince Rupert in tough condition. I understand the dryer in the Prince Rupert elevator would be hard pressed to make it in a ladies hairdressing salon.

Meanwhile Aegean Sea has been sitting at anchorage at Prince Rupert since February 13th, but will commence loading tomorrow, February 18th. However, at this time we have no idea when she will complete. We have now been advised by the Board that both the Chukchi Sea and Koro Sea must be diverted to Vancouver as they cannot handle these two ships in Prince Rupert in February."

The Commission recommends that the terminal at Prince Rupert be enlarged to a capacity of six million bushels and fully modernized,

and that it be operated to its fullest extent as part and parcel of Canada's grain export operations. It must not continue to be an orphan in the export family. Dr. Kristjanson, Assistant Chief Commissioner, Canadian Wheat Board, when appearing before the Standing Committee on Agriculture, House of Commons, June 1976, stated:

"Well, as far as our Board is concerned, we are very, very anxious to see a development at Prince Rupert... We would like to see another 3 million bushels storage capacity added to the present facility as an absolute minimum. ... the crux of the problem from the standpoint of the existing grain companies is that they do not like the Canadian Wheat Board to be directing grain that they originated in their country elevators to somebody else's terminal. And that is why our position has been that it would work much better if it (Prince Rupert) were in the hands of someone who was also originating the grain in the country."

Failing full utilization by the Canadian Wheat Board, the terminal should be entrusted (leased or sold) to a grain exporting concern which would have a financial incentive to use it to its full exporting capacity, and not for storage income which its use as a surge facility for Vancouver might make it economic but inactive.

With efficient and continued use of Prince Rupert, some of the millions spent annually on demurrage in Vancouver could be saved for the producers whose money it is.

Interior Canadian Government Elevators

The Canadian Grain Commission operates and maintains the Canadian Government Elevator System of five interior terminal elevators.

TABLE VII-4 Canadian Government Elevators		
Location	Storage Capacity (bus.)	Opening Date
Saskatoon	5,500,000	October 15, 1914
Moose Jaw	5,500,000	October 14, 1914
Calgary	2,500,000	September 1, 1915
Edmonton	2,350,000	October 16, 1924
Lethbridge	1,250,000	October 8, 1931

The advantages for building the interior government elevators were set out in the Report of the Grain Commissioners for the year 1912.

1. They would bring inspection and terminal storage nearer to the grain producer, and thus secure for him quicker returns and better financial terms.
2. Grain stored at such points could be shipped by any of the alternative routes available, according to conditions, by the Panama Canal and Hudson Bay routes, if practicable, and in the event of the duty on grain being lowered or removed, south also.
3. Such elevators would be equipped with cleaning and drying apparatus, and would thus make the best possible provision for such conditions as obtained last year.

4. Such elevators would tend to assist the milling industry in the west. Under present conditions only the very largest mills can buy to advantage. Smaller mills buy from local elevators and from farmers and buy at a disadvantage, not having official grades and not having large stores of grain to draw from.
5. Such elevators would tend to preserve in existence local grain dealers and independent buyers.
6. Such elevators would tend to distribute the shipping of grain more equally throughout the year, and especially in the more western sections should the Panama Canal route prove feasible.
7. Such large interior elevators would in general provide that reserve storage capacity which Western Canada now lacks, would, therefore, provide for all emergencies, whether of production, climate or congestion; would bring inspection into closer relation with production; and would thus secure for the grain growers of Western Canada those advantages of quicker returns and alternate shipping routes which they can now only observe south of the boundary line.

These facilities have been used very sparingly over the past several years because the grain handling companies have, quite naturally, preferred to establish their own facilities whereby they are able to maintain control over Canadian Wheat Board grain and their grain and realize profit from the grain handling and storage.

TABLE VII-5
NET RECEIPTS OF GRAIN - INTERIOR TERMINAL ELEVATORS
(thousand bushels)

CROP YEAR	Wheat	Durum Wheat	Oats	Barley	Rye	Flaxseed	Rapeseed	TOTAL
1965/66	3,649	26	41	1,267	26	74	1,313	6,397
1966/67	12,758	4	6	1,261	10	33	164	14,236
1967/68	1,896	6	12	1,197	7	4	25	3,147
1968/69	17,471	10	83	1,051	7	63	24	18,709
1969/70	2,634	41	9	1,429	4	201	525	4,843
1970/71	852	142	16	1,834	22	124	2,332	5,322
1971/72	832	1,226	10	9,369	28	2,550	1,320	15,335
1972/73	746	1,193	126	4,784	4	1,795	5,118	13,766
1973/74	13,406	1,977	380	9,908	221	893	3,317	30,102
1974/75	14,063	4,553	183	8,960	220	148	3,302	31,428
AVERAGE	6,831	918	87	4,106	55	589	1,744	14,329

As at mid March 1977 the interior elevators had 6.2 million bushels in store, utilizing about one-third of their capacity of 17.1 million bushels.

The Government elevators are in place. They are in relatively good condition. They contain good drying equipment. Any deficiencies in cleaning equipment could be overcome quickly. These elevators are capable of conditioning grain to export standards. These elevators are practically unused, while at the same time the farmers of Western Canada, through the Canadian Wheat Board, are subsidizing additional terminal capacity at the Coast. The non-use of the Government elevators constitutes a waste of resources.

The railway practice of charging a large stop-off charge (currently 18 cents per hundredweight) for in-transit grain held for storage, cleaning or drying has been detrimental to the use of these public facilities.

Cleaning Capacity

Government elevators have the following cleaning capacity at each plant. Basis a two shift daily operation.

- Moose Jaw	90,000 bushels
Saskatoon	120,000 bushels
Calgary	60,000 bushels
Edmonton	120,000 bushels
Lethbridge	<u>50,000 bushels</u>
TOTAL	440,000 bushels

On a five-day week operation these plants have a three shift annual capacity of 114.4 million bushels. On a six-day operation they have the capacity of 205.9 million bushels. These plants have adequate receiving and loading capacity, with cleaning being the limiting constraint.

The Commission feels that the producers of Western Canada should not be expected to again pay for the duplication of grain handling facilities. The Commission recognizes that the utilization of these Government elevators may be to the detriment of the revenue generating capacity of the grain companies. However, in terms of efficient operation of the total system, it is incomprehensible that farmer organizations are now being established to build facilities nearly identical to

those that have been provided by the Government of Canada, and leave the latter unused. The Commission has no doubt about the ability of the system to function more smoothly if these Government elevators were used to condition grain for export, thereby using either current port terminals, or bulk loading facilities for the transfer of the conditioned grain from rail to ship. The Commission interprets the Canadian Wheat Board Act to mean that class B grain purchased for the Board by a primary elevator immediately becomes the property of the Canadian Wheat Board, subject only to the limited provisions of section 37 of the Act. The Canadian Wheat Board has the right to direct grain to terminals as it sees fit.

The Commission recommends the full use of the Government elevators and the construction of another one at Yorkton.

The Commission does not look upon the Government elevators as replacement for any of the current terminal capacity facilities, but as an addition to systems capability of handling grain.

The Commission recognizes that even with the elimination of the stop-off charges that there are going to be additional handling costs associated with the utilization of the Government elevators. However, these should be more than offset by the ability to respond to market opportunities; to achieve such things as the elimination of demurrage of waiting ships, and the ability to use all the ports more effectively.

Agriculturally related activities on the Prairies should be promoted when and where natural locational advantages exist. Grain cleaning is one of these. This processing can take place on the

Prairies where there is no population congestion, less environmental impact concerns and an opportunity for utilization of by-products.

The Commission recommends:

- Elimination of the railway stop-off charge for in-transit shipment of grain held at interior Government elevators for storage, cleaning or drying;
- Utilization of the interior terminals to the fullest extent possible to supplement storage and cleaning capacity at Thunder Bay, Churchill, Prince Rupert and Vancouver; and,
- Construction of a new interior terminal at Yorkton to supplement capacity and throughput at Churchill.

CHAPTER 8

ENERGY AND GRAIN TRANSPORTATION

ENERGY AND GRAIN TRANSPORTATION

The energy crisis of the 1970's has created a general awareness of the fact that mankind's conventional energy sources are finite in nature. Since World War II, North America's total annual energy consumption has doubled every 16 years.* There is general agreement that this exponential exploitation of finite natural resources may be one of the major limits to growth of the world's population and industrial society within the next century.**

In voicing resistance to changes involving rail line abandonment, virtually all submissions to the Commission at local hearings cited increased energy consumption as a major concern. The general comments centred around the argument that trains can move loads a given distance on much less fuel than if an equivalent amount of work was performed by trucks. Typical power unit energy or fuel consumption figures have been cited to show that trains are from three to nine times more efficient than trucks.

An overview and breakdown of energy resources and consumption in society at large will lend perspective to further examination of the possible energy effects of rationalization in the prairie grain handling and transportation system.

* Cheney, Eric S., Scientific AmericanJan. - Feb., 1974.

** Meadows, D.H., D.L. Meadows, G. Randers and W.W. Behrens III, 1972. The Limits to Growth, N.Y.: Signet, 207 p., esp. Figures 35 and 36.

Energy Resources and Consumption

Table VIII-1 shows that at the 1972 production rate of 19 billion barrels, proven petroleum reserves of 562 billion barrels would have been sufficient to last about 30 years. Considerable disagreement exists as to the magnitude of ultimate oil and gas reserves; estimates of the U.S. Geological Survey are six to seven times greater than those of another independent party. However, the reserves are still finite and with demand growing exponentially, an arithmetic increase in the reserves does not appreciably extend their lifetimes. For example, a doubling period for consumption of 10 years would absorb an eight fold increase in reserves in only 30 years.

Alternative sources of petroleum products do exist even within the boundaries of the world's largest consumer as shown in Table VIII.2 Interpretation of these figures by comparison with oil reserves would indicate that there is a nearly inexhaustable supply which simply must be "unlocked" to provide several decades or centuries for a shift to use of renewable resources such as solar or hydro or to release the unlimited potential of atomic energy. Such interpretation is much over-simplified and overly optimistic given present technology in the extraction of oil from solids. In the case of coal, oil shale and tar sands, the only significant commercial activities today involve actual mining and handling of the solid material and transporting that solid to a processing point. A 100 thousand barrel per

TABLE VIII-1

NATIONS WITH GREATEST PROVEN PETROLEUM RESERVES, 1972

COUNTRY	RESERVES (1)	PRODUCTION (1)	NET EXPORTS 1970 or 1971(2)	U.S. IMPORTS (3)
(All figures in 10 ⁶ bbl.)				
Saudi Arabia*	137,100	2,201	1,378	159
Kuwait*	73,937	1,097	1,276	19
Iran*	62,202	1,849	1,573	57
USSR	42,000	2,896	233	3
United States	36,339	3,457	(-1,325)	--
Iraq*	33,000	536	546	2
Libya*	24,100	822	999	38
Abu Dhabi*	18,234	384	383	12?
Venezuela*	13,872	1,178	1,219	448
Neutral Zone*	13,500	208	(with Kuwait and Saudi Arabia)	
Nigeria*	12,600	665	533	89
China	12,500	192	(-1)	0
Indonesia*	10,700	395	263	60
Algeria*	9,750	398	351	36
Canada	8,020	564	9	371
Ecuador*	5,964	29	(-8)	6
Qatar*	5,832	177	133	2
<hr/>				
TOTAL	519,686	17,050	8,894	1,372
OPEC* Total	420,827	9,939	8,644	998
World Total	562,295	18,638	--	1,651
* Member, Organization of Petroleum Exporting Countries (OPEC)				
References: (1) World Oil, 15 August, 1973;				
(2) Albers et al. 1973;				
(3) U.S. Bureau of the Census 1973				

TABLE VIII-2		
U.S. FOSSIL FUEL ENERGY RESOURCES BILLIONS OF BARRELS OIL EQUIVALENT		
	Identified Recoverable	Undiscovered or Difficult to Recover
Oil	37	113
Shale		
Over 25 Gal/Ton	418	
Less than 25 Gal/Ton	1,600.....	22,500
Coal	1,900	12,200
Tar Sands	30*	--
* Evaluated Canadian Tar Sand Oil Reserves in Alberta are approximately 600 billion barrels.		

day oil shale plant requires about 168 thousand tons of shale every day, roughly eight times as much solids handling as the largest coal mine in the United States ... and 100 thousand barrels per day is about 0.6 percent of current petroleum demand in that country.* Similar drawbacks exist to the extraction of oil from coal and tar sands.

Having acknowledged the serious proportions of future petroleum use and availability, it would appear that possible solutions to inadequate supply will be dependent upon careful analysis of petroleum derivatives application and upon use of alternative energy sources.

* Coppoc, W.G. Fuels for Transportation. Energy and Transportation SP 406, February 1976. Society of Automotive Engineers.

Popular forecasts of energy consumption point to dramatic growth in the contribution of coal and nuclear energy over the next couple of decades with growth rates in oil demand decreasing from five percent to one to two percent per year.* Since transportation presently accounts for approximately 60 percent of the total oil market, such predictions are based on significant decreases in the average annual growth of consumption in this sector.

The relative opportunity for savings in fuel consumption within the transportation sector may be appreciated by reference to Table VIII-4**which provides a breakdown of fuel consumption within the Canadian transportation field. This is fairly consistent with an estimate of 1971 United States consumption which indicated that the automobile accounted for about 60 percent of fuel consumed in transportation. Road diesel users include inter-city buses and urban transit as well as trucks and therefore the resultant allocation of diesel fuel to trucks primarily on intercity hauls in Canada may be about three percent.***

* Loveland, E.F. Non-Transportation uses for Petroleum: Impact on Fuel Availability. Energy and Transportation, SP 406, February, 1976. Society of Automotive Engineers.

** Detailed Energy Supply and Demand in Canada, 1958-1969 and 1970-72, Statistics Canada Catalogue 57-205 and 57-207.

*** Mayes R. Robert. Trucking and Energy. A paper presented at the Annual Conference of Roads and Transportation Association of Canada, Calgary, September 23, 1975.

A study by the U.S. Department of Transportation was undertaken to determine the potential for energy savings in transportation. The results of the analysis are summarized in Table VIII-4*. It would appear reasonable, considering the breakdown by usage of Table VIII-3 for the Canadian scene, that the United States study found that major potential for energy savings is in improved automobile and truck efficiency. The potential of three to four percent savings through a shift of 50 percent of inter-city trucking to rail freight was not viewed as significant or practical. It was concluded that rail transport was most efficient in the line-haul mode and that energy consumption could be decreased by switching from truck to rail for line haul freight with the flexibility of trucking at the collection-distribution points.

TABLE VIII-3 CANADIAN FUEL CONSUMPTION -- TRANSPORTATION	
Road - Gasoline	72.3%
Road - Diesel	4.1%
Rail	7.0%
Air	7.9%
Marine	8.7%
	100.0%

* Goodson, R. Eugene. Energy Utilization by Various Modes of Transportation. Energy and Transportation, SP 406, February 1976. Society of Automotive Engineers.

TABLE VIII-4

SELECTED TRANSPORTATION ACTIONS AND ESTIMATED SAVINGS AS
PERCENTAGE OF TOTAL TRANSPORTATION ENERGY (U.S. 1970)

Number	Action	Total Transportation Energy Savings(%)
1	Convert 50% of passenger car population to small cars (22 mpg)	9.0
2	Introduce in 50% of highway vehicles a 30% reduction in fuel consumption	11.5
3	Eliminate 50% of urban congestion	1.1
4	Achieve 50% success in limiting highway speeds to 50 mph	2.9
5	Persuade 50% of urban commuters to car pool	3.1
6	Shift 50% of commuters (to and from city centres) to dedicated bus service	1.9
7	Shift 50% of intercity auto passengers to intercity bus and rail, evenly	3.0
8	Shift 50% of intercity trucking to rail freight	3.4
9	Shift 50% of short haul air passengers to intercity bus	0.29
10	Persuade 50% of the people to walk or bike up to five miles, instead of driving	1.6

Energy and Grain Transportation

One must be careful in defining "efficiency of movement", in that energy consumption and even total cost are only elements of the total equation. Other important considerations such as "quality of service" which might be measured by delivery time or physical condition of cargo contribute to overall performance of the service. From

a strictly economic point of view, energy consumption influences the determination of the optimum transport mode only through a cost factor and the same principles apply to selection of service as to the selection of competing goods in an open market. Proponents of the economic approach to mode selection claim that through emphasis on "value" there is natural gravitation to the best mixture of competing modes. Fuel consumption and costs therefore do contribute to determination of total cost and resultant "value".

It is significant that a number of references to the matter of energy consumption throughout commission hearings did not explicitly associate possible energy increases with higher costs. This would indicate that many individuals and organizations are concerned about future supply and that it is understood that resultant energy costs could become prohibitive. This expression of concern on the part of the public at large combined with an obvious real limit to petroleum resources as discussed in the earlier section of this chapter led to the conclusion that a detailed study* of energy trade-offs inherent to branch line rationalization was imperative.

Several factors determine the energy required to move goods and commodities as follows:

- power unit efficiency
- ratio of gross weight and carried load
- routing
- gathering and loading cycle.

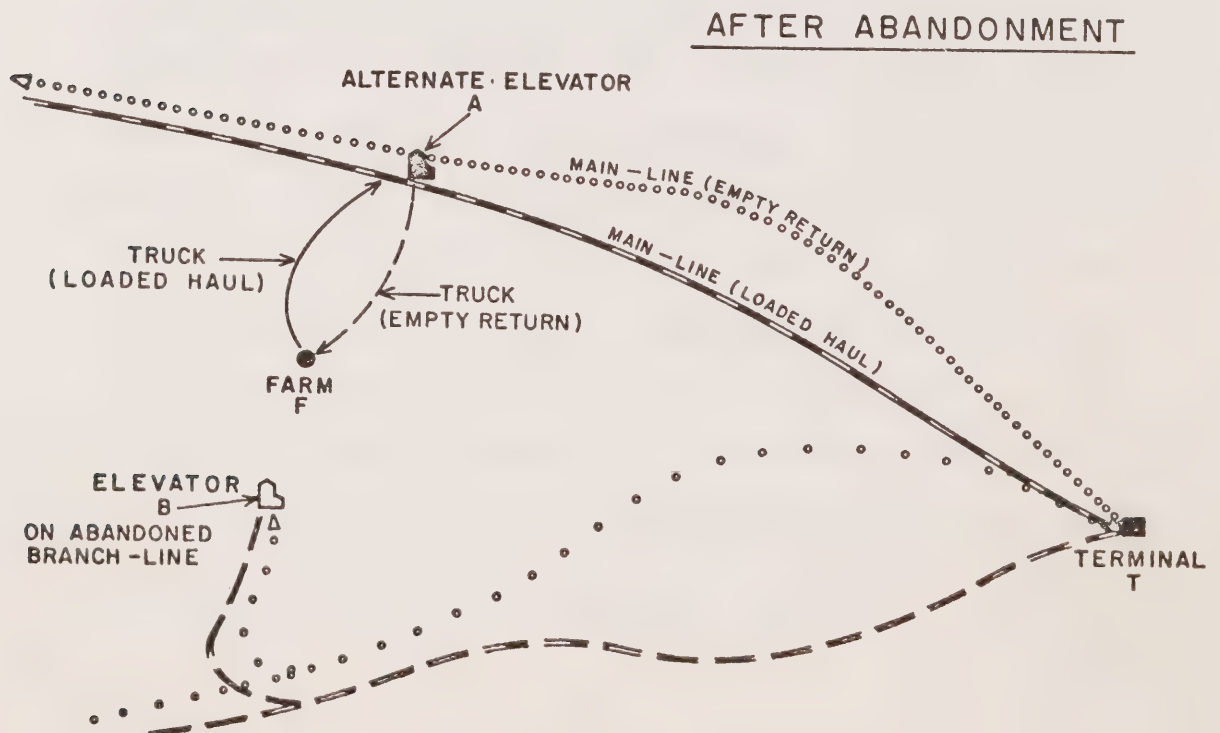
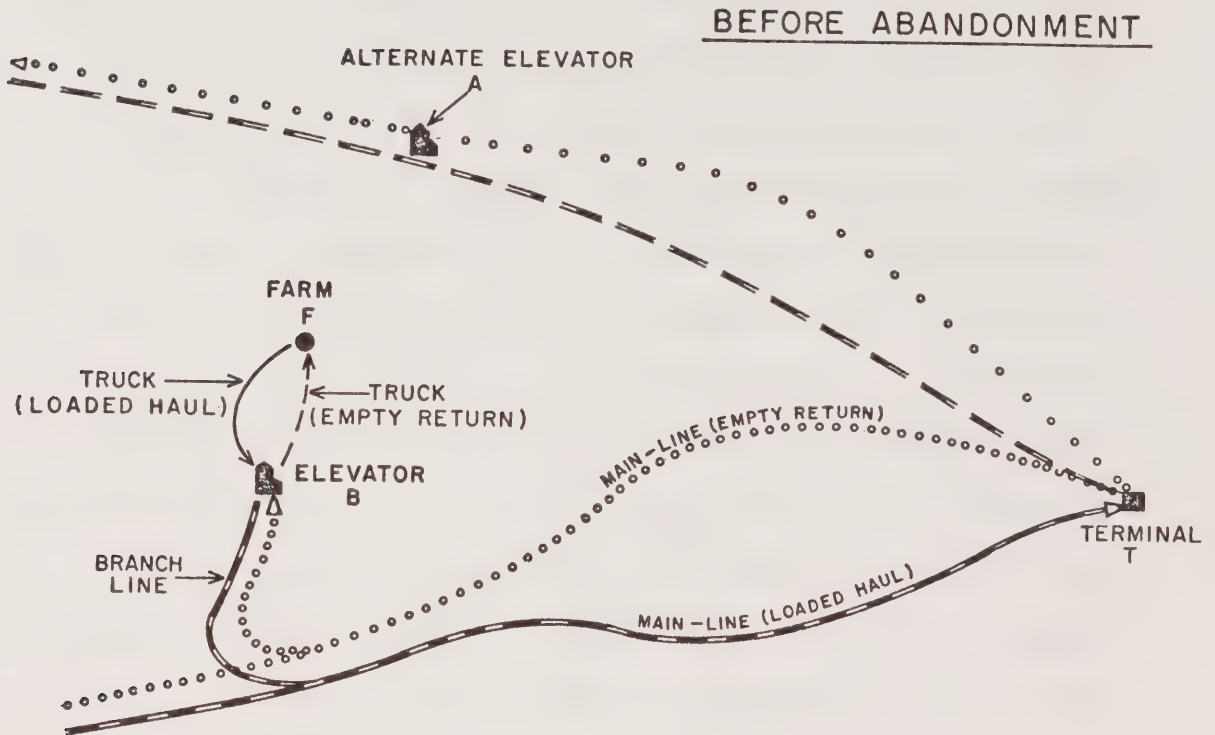
* The Energy Implications of Rationalization of Light Density Traffic Branch Lines prepared for the Grain Handling and Transportation Commission by Clayton Sparks & Associates Ltd., Regina, Saskatchewan March 1976. See Grain and Rail in Western Canada, Volume 2.

The energy efficiencies of the rail and truck modes (including private farm truck, custom farm truck and commercial grain truck) operating in grain assembly in the prairies were defined for investigation. The relatively slow speeds and small size of trains operating in grain assembly and the relatively small size of truck normally employed in grain haul suggested that indiscriminate use of modal system average transportation energy efficiencies for assessing energy requirements in grain assembly is somewhat questionable. Energy implications of rationalization are also a function of routing in that railway grain hauls from certain centres are effected in such a circuitous manner that energy savings might be realized by diverting grain (through increased truck haul) to centres from which rail routing is more direct. This section and the following two sections of this chapter present the findings of this investigation.

The study was directed at the development of a methodology for estimating the energy implications of any practical branch-line abandonment option and subsequent application of this procedure to specifically defined example abandonment scenarios. Figure VIII-1 illustrates a stylized general example of a before and after abandonment situation. Loaded and empty rail cars will often be routed through a point which is common to the before and after cases somewhere between the primary elevators and the destination terminal. In such cases, it would only be necessary to assess fuel requirements from the farm to the common point.

FIGURE VIII-1

STYLIZED EXAMPLE OF A
"BEFORE" AND "AFTER"
BRANCH-LINE ABANDONMENT
SITUATION



-- Fuel Consumption of Trucks

Grain is transported from farm to elevator in gasoline and diesel-powered trucks ranging in size from small half-tons to 82 thousand pound g.v.w. combination units. Therefore wide variations in the transportation energy efficiencies of trucked grain are experienced. For purposes of this study, transportation energy efficiency was defined as the number of gallons of fuel consumed in both the empty and loaded directions of haul in effecting a movement of one thousand "typical" bushels over a distance of one mile.*

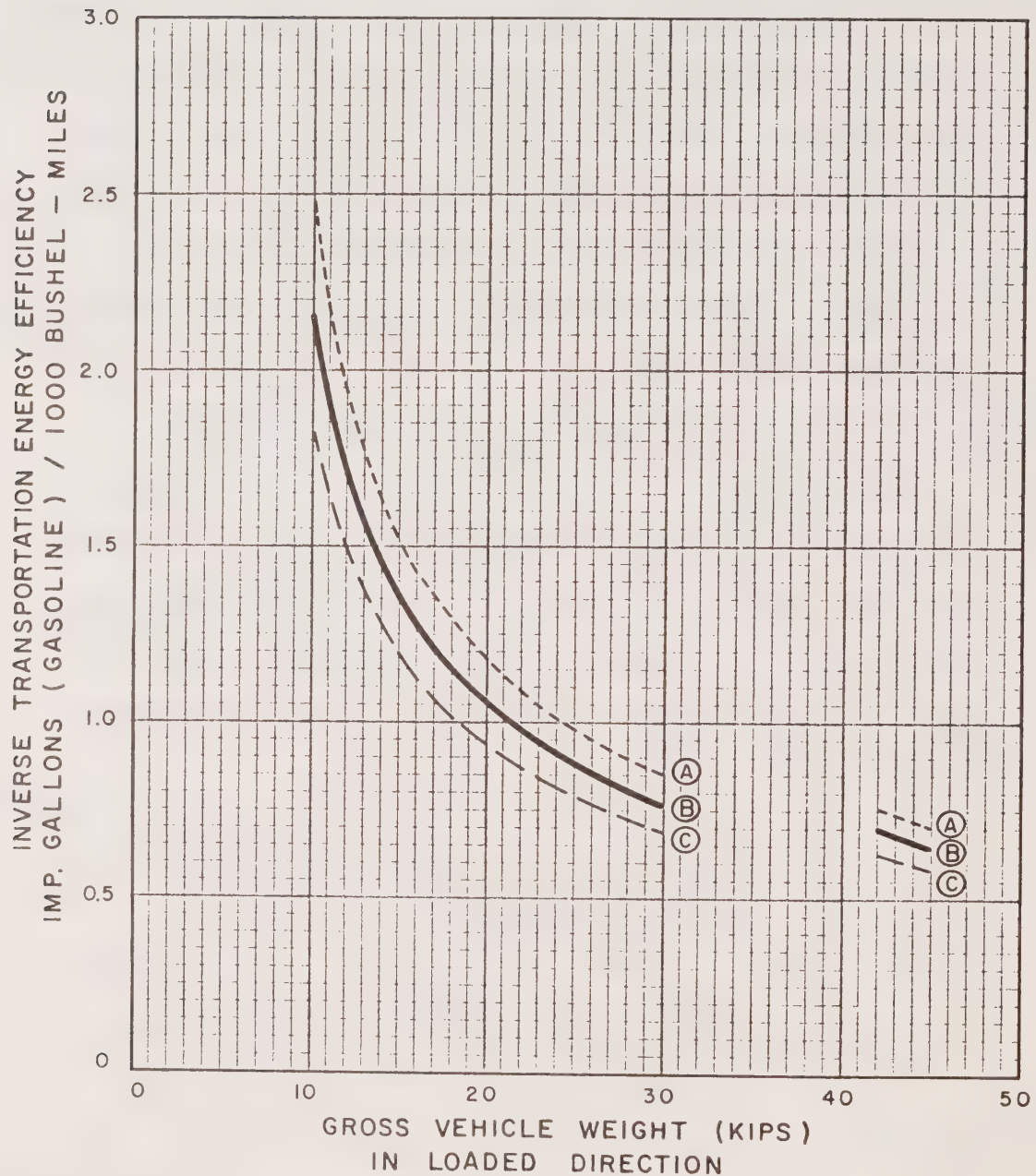
As truck size increases the efficiency of the vehicle as a carrier improves. This is due to a number of factors such as an increase in the ratio of payload to tare weight. The study derived a range of efficiencies as illustrated for gasoline fueled trucks in FigureVIII-2 and for the larger diesel trucks as shown in TableVIII-5. These illustrations show for example that:

- a) Over a range of farm truck sizes from 12 thousand g.v.w. to 28 thousand g.v.w. gasoline consumed in movement of 10 thousand bushels a distance of ten miles would range from 170 to 81 gallons.
- b) To move 10 thousand bushels a distance of 10 miles by an average farm truck of 20 thousand pounds g.v.w. would require 106 gallons of gasoline as compared to 45 gallons of diesel fuel to effect the same movement with a 74 thousand pound g.v.w. commercial truck.

* It was determined that a typical bushel weighed 55 pounds.

FIGURE VIII-2

SCHEDULE OF INVERSE TRANSPORTATION ENERGY EFFICIENCY FOR PRIVATE AND CUSTOM FARM TRUCKS GASOLINE — FUELED



LEGEND :

- (A) — COMBINATION OF "HIGH" CONSUMPTION AND "LOW" PAYLOAD
- (B) — COMBINATION OF "MEDIUM" CONSUMPTION AND "MEDIUM" PAYLOAD
- (C) — COMBINATION OF "LOW" CONSUMPTION AND "HIGH" PAYLOAD

TABLE VIII-5

CALCULATIONS OF INVERSE TRANSPORTATION
ENERGY EFFICIENCY FOR COMMERCIAL TRUCKS

G.V.W. Loaded Direction (lbs.)	Diesel Fuel Consumed Per Return- Mile Trip (Gallons)			Payload Per Trip lbs./bushel	Inverse Transportation Energy Efficiency imp. gallons (diesel)/ 1000 bushel-miles		
	HIGH	MEDIUM	LOW		HIGH	MEDIUM	LOW
74,000	.404	.388	.374	47,500/863.6	0.47	0.45	0.43
75,000	.404	.388	.374	48,500/881.8	0.46	0.44	0.42
82,000	.408	.392	.378	55,500/1009.1	0.40	0.39	0.37

-- Fuel Consumption of Trains

A limited number of specific fuel consumption measurements were undertaken by the railways for this study. The reasonableness of these results were tested from the theoretical standpoint by estimating fuel requirements over a range of branch line situations using resistance equations based on the work of Davis. These calculations demonstrated the kind of variation which can occur from one specific fuel measurement to the next.

The basic assumptions used in the calculation were:

- 1) branch-line originating grain is transported in standard 60 ton box-cars with tare weights of 22 ton, "normal" loaded weights of 79 ton, and payloads of 57 ton.*

* These weights were derived from an assessment of the consistent information provided by the railways for a number of branch-line and main-line runs, and general equipment lists. Hopper cars have not been considered because of their relatively limited employment on light density traffic branch lines.

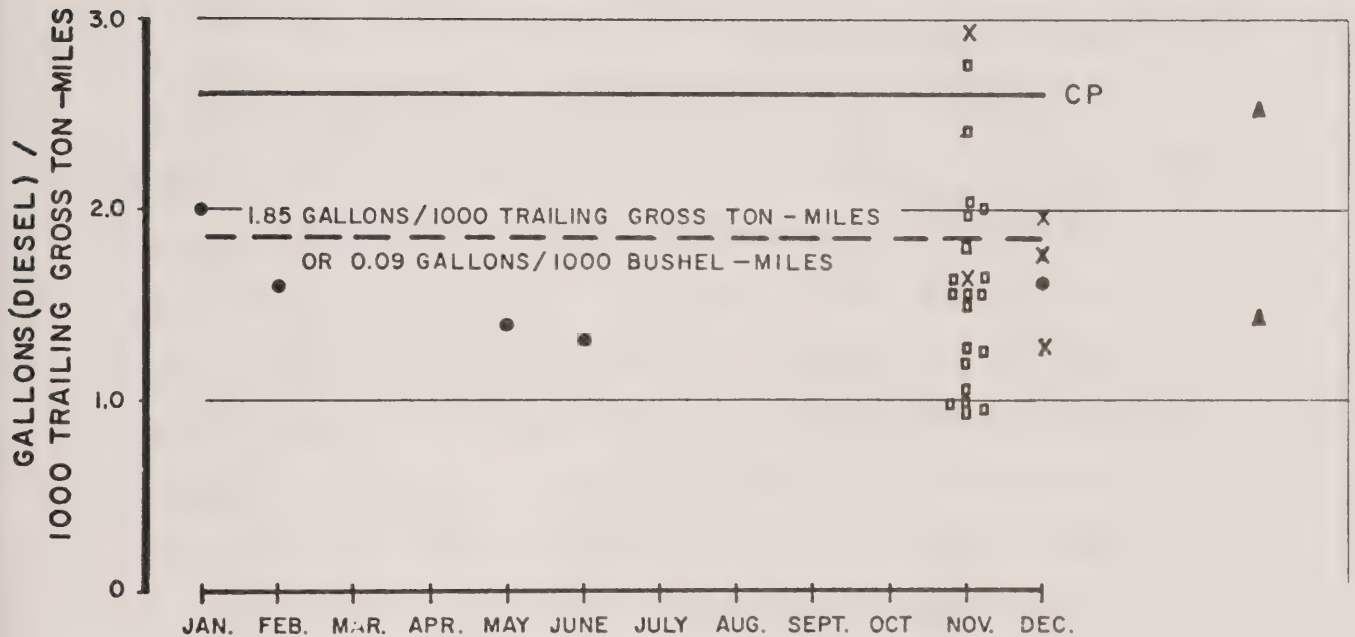
- 2) for each loaded mile travelled by a box-car, the car travels one mile in an empty state.
- 3) for each mile travelled by a locomotive pulling loaded cars, it travels one mile pulling empty cars.
- 4) the payload of 57 tons is equivalent to 2,070 "typical" bushels (i.e. 55 pounds per bushel).

These calculations suggest that a normal range of transportation energy efficiencies for branch-line operation is from 0.07 to 0.12 gallons of diesel per one thousand bushel miles. The calculations showed that it is totally in order to expect efficiency levels beyond this range on specific runs and lines (i.e. with lower temperatures, greater grade effects, dead heading operation, higher sidewinds and so on). Nonetheless it was concluded that normal branch-line operation for most lines when considered year-round would fall within the calculated range.

For comparative purposes, Figure VIII-3 illustrates a number of measured consumption rates provided by the railways, including system averages, and a limited number of spot tests. These rates have been developed on the basis of trailing gross ton-miles (i.e. exclusive of the weight of engines). For most of the points plotted, fuel consumed in associated idling and switching has been included in the rate calculation. Based on Canadian National Railway data, an average experienced consumption rate in the prairie region is about 1.70 gallons per one thousand trailing gross

FIGURE VIII-3

FUEL CONSUMPTION RATES EXPERIENCED BY RAIL IN PRAIRIE OPERATION



LEGEND:

- CN PRAIRIE REGION SYSTEM AVERAGES (UN - OFFICIAL)
- x SPOT TESTS (TWO - WAY HAUL) - CN
- SPOT TESTS (ONE - WAY HAUL) - CN
- ▲ CALCULATED VALUS FOR SPECIFIC SCENARIOS (SEE TEXT AND ATTACHMENT C)
- CP CONSUMPTION RATE APPLIED IN CP's "ON - LINE" SUBSIDY CALCULATIONS FOR C.T.C. (1974) (UN - CONFIRMED)

ton-miles, ranging from 1.30 to 2.10 gallons through the year.* This range and average is considered applicable to cases wherein trains operate on the lines more or less year round, in such a manner as to run basically a train-load (say 20 to 50) of empty 60 ton box-cars "out" a line, returning with approximately the same number of cars loaded. The weight of locomotives would be excluded from the gross ton-mile determination, and consumption would include fuel for idling and switching, both along the run and at both ends of it.

Using the typical load per car of 2,070 bushels, tare car weights of 22 tons, and loaded car weights of 79 tons, for every 101 tons of gross ton-mile haul (i.e. 22 tons empty for one mile, and 79 tons loaded for one mile), 2,070 bushels are moved one mile. Converting the consumption rates discussed above, the average transportation energy efficiency for rail operating in grain assembly is 0.083 gallons of diesel per one thousand bushel-miles, normally falling in a range from 0.063 to 0.103 gallons per one thousand bushel-miles.

Further comparison was carried out with other studies of branch line fuel consumption, and based on various figures, it was concluded that an energy efficiency rate of 0.09 gallons per

* In comparison, the study of "Arctic Oil and Gas by Rail", 1974, presents data indicating consumption rates of 0.97 to 1.20 gallons per one thousand trailing gross ton-miles, for relatively high speed unit trains hauling oil and LNG.

one thousand bushel-miles could be considered on appropriate rail rate to utilize in modal comparison and in the analysis of specific case situations.

-- Modal Energy Comparison, Truck-Rail

In order to compare modal energy efficiencies of grain collection in the prairies, it was necessary to establish the point on the small truck schedule which approximates the average energy efficiency rate for private farm truck haul. Since smaller trucks are less efficient than larger trucks, the consumption rate at the average g.v.w. operating level would not necessarily account for the effect on average consumption of the distribution in vehicle size and the distribution of grain haul activity by vehicle size. Accordingly an analysis was undertaken to establish the weighted average loaded g.v.w. figure to employ in the determination of average energy efficiency. For the private farm truck haul situation throughout the prairies, previous farm trucking surveys were used and it was estimated that the weighted average g.v.w. appropriate to determination of average transportation efficiency was 19,920 pounds. Therefore, from Figure VIII-2 the average transportation efficiency for private farm trucked grain across the prairies was 1.07 gallons of gasoline per one thousand bushel-miles.

Since the energy efficiency curve was quite flat over the range of truck sizes used for custom farm trucking,

the value selected for this mode was based on an approximate average load capacity in the prairies taken from a previous survey of custom truckers. Then based on this average loaded g.v.w. (of 26.4 thousand pounds) the average energy efficiency for custom farm-trucked grain was 0.85 gallons of gasoline per one thousand bushel-miles.

Discussion with weight scale operators and analysis of the Saskatchewan Trucking Association*/Canadian Wheat Board elevator to terminal haul suggested that a 75 thousand pound loaded state is normal for commercial trucks hauling grain. The average energy efficiency from Figure VIII-3 would be 0.44 gallons of diesel per one thousand bushel-miles.

Comparative fuel consumption rates for each mode are illustrated in Figure VIII-4. On a gallonage equivalency basis, the ratios of average fuel consumption versus average rail fuel consumption are:

Private far truck vs. rail 11.9:1

Custom farm truck vs. rail 9.4:1

Commercial truck vs. rail 4.9:1

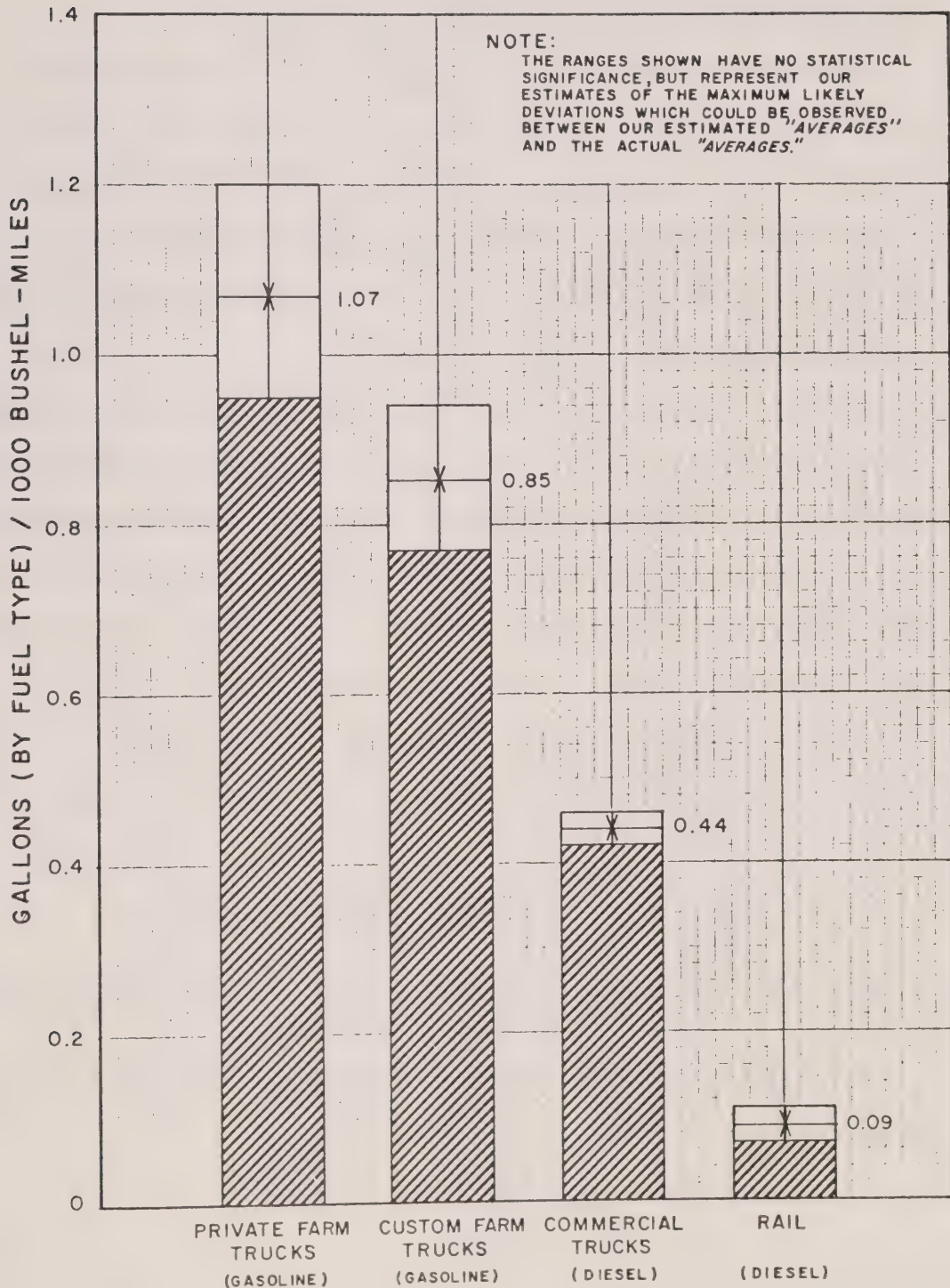
Since the energy content of a gallon of gasoline is less than the energy content of a gallon of diesel the above ratios should also be presented on a BTU equivalency basis** as follows:

* The Saskatchewan Trucking Association entered into an agreement and helped expedite this experimental program on behalf of carriers.

** Conversion Basis: 1 gallon of gasoline = 149,200 BTU
1 gallon diesel = 166,500 BTU

FIGURE VIII-4

A MODAL COMPARISON OF INVERSE TRANSPORTATION ENERGY EFFICIENCY IN GRAIN ASSEMBLY ESTIMATED PRAIRIE AVERAGES



Private farm truck vs. rail	10.6:1
Custom farm truck vs. rail	8.5:1
Commercial truck vs. rail	4.9:1

Fuel Costs and Grain Transportation in Western Canada

Variations between type of fuel and location of purchase will create modal comparative ratios of fuel cost which differ from the ratios of energy consumption by gallons or BTU's. The cost effects of adjustments in the grain transport system can be determined by the application of developed unit prices to estimated changes in consumption quantities.

For the consumer, the price of gasoline and diesel fuel is made up of two components: the economic cost of the fuel; and the federal and provincial taxes added to fuel at points of production and sale.

For purposes of this study, a generalized method was developed for calculating applicable fuel prices for a number of regional locations across the prairies. The method consisted of:

- 1) the simple multiplication of the "Edmonton refining centre" energy cost by a transportation/competition factor to obtain a regional energy price at another location;
- 2) a deduction from this factored price to account for trade discounts, where applicable; and,
- 3) the addition of applicable Federal and Provincial taxes to determine buyers' prices.

Table VIII-6 summarizes the fuel prices which were determined for the prairies.

TABLE VIII-6

EXAMPLE OF FUEL PRICE DETERMINATIONS IN THE PRAIRIES
(BY PURCHASER AND LOCATION)
(CENTS/GALLON)

Determination of Energy Costs in 1975

Fuel Type	Diesel	Gasoline	Diesel
Fuel Purchaser	Railway	Farmer	Commercial Trucker
Location	Carlton, Sask.	Brandon, Man.	Rockglen, Sask.
Edmonton Energy Price	40.5	41.6	40.5
Multiply by Regional Transport Cost Factor	<u>1.08</u>	<u>1.06</u>	<u>1.07</u>
Regional Energy Price	43.7	44.1	43.3
Less Discounts	<u>10.0</u>	<u>0.0</u>	<u>3.0</u>
Energy Cost to Buyer	33.7	44.1	40.3
ADD: Taxes			
-- Federal Sales Tax	3.7	3.9	3.7
-- Provincial Tax	<u>4.0</u>	<u>0.0</u>	<u>16.0</u>
TOTAL ENERGY PRICE	41.4	48.0	60.0

Figure VIII-5 illustrates the results of converting fuel consumption to fuel cost for one particular case, utilizing the prairie average consumption rates developed, and modal fuel prices at Saskatoon. From a total energy cost standpoint (including taxes/rebates), private farm trucks, custom farm trucks, commercial trucks, and rail expend 42.1 cents, 33.4 cents, 25.5 cents and 3.5 cents of fuel per one thousand bushel-miles of haul, respectively.* (It is to be noted from Figure VIII-5 that, at present in Saskatchewan, an average one thousand bushels being moved one mile by a private farm truck effect a direct total government cost of 3.3 cents. The same one thousand bushels moved one mile by commercial truck generate a direct total government revenue of 8.7 cents. The net government gain to be realized per one thousand bushel-miles of haul transferred from private farm truck to commercial truck is, therefore, 12.0 cents).

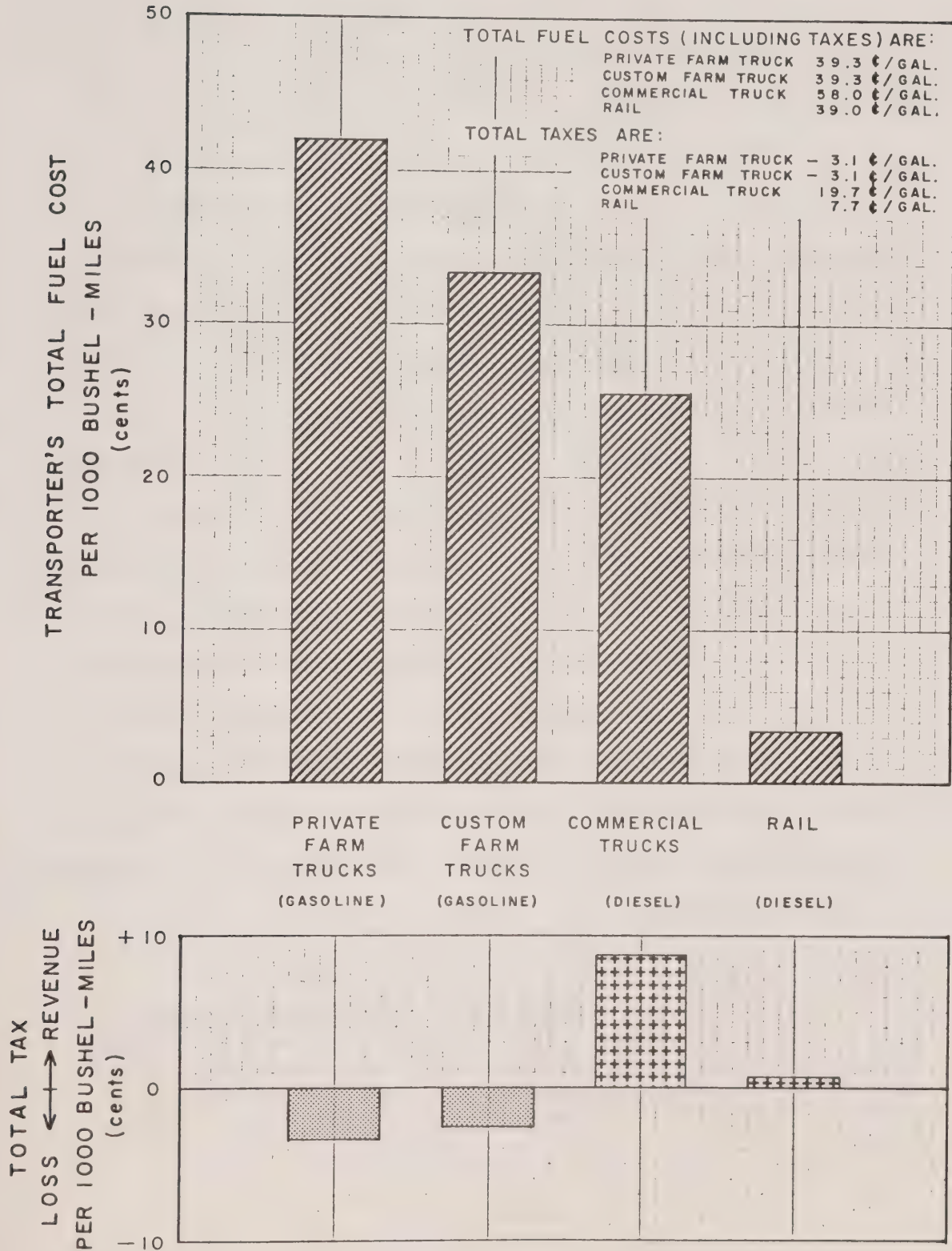
Utilizing these total cost figures, the fuel cost efficiency ratios, comparing one mode to the rest at Saskatoon, are:

Private farm truck vs. rail	12.0:1
Custom farm truck vs. rail	9.9:1
Commercial truck vs. rail	7.3:1

* For example - for the private farm truck:
 Consumption = 1.07 gallons (gasoline) per one thousand bushel-miles.
 Price of gasoline (including F.S.T.
 and provincial rebate) = 39.3 cents per gallon.
 Inverse transportation fuel cost
 efficiency = 1.07×39.3
 = 42.1 cents per one thousand
 bushel-miles

FIGURE VIII-5

A MODAL COMPARISON OF TRANSPORTER'S
TOTAL FUEL COSTS PER 1000 BUSHEL-MILES
AND
TOTAL TAX REVENUE (LOSS) PER 1000 BUSHEL-MILES
AT SASKATOON - DEC. '75



The comparable ratios as developed for Brandon, Manitoba, and Red Deer, Alberta, are:*

	<u>Brandon</u>	<u>Red Deer</u>
Private farm truck vs. rail	15.2:1	12.8:1
Custom farm truck vs. rail	11.0:1	11.5:1
Commercial truck vs. rail	7.7:1	6.9:1

Over the prairies, it can be seen that the major difference between the ratios of modal fuel consumption efficiencies and modal fuel cost efficiencies is experienced by the commercial truck, which enjoys neither the bulk purchasing power of the railways, nor the preferential tax treatment of the farmer (or custom farm truck). In effect, while the commercial truck is 2.4 times as efficient as the private farm truck from the fuel consumption standpoint, while operating in grain assembly, it is only 1.8 times as efficient from the fuel cost standpoint. While fuel taxes account for less than 10 percent of fuel cost for farmers and railway, they account for one-third of the commercial truckers' fuel cost. The commercial truck, of course, is the only road mode which contributes direct tax to provincial governments for road construction and maintenance (if it is assumed that the "general" provincial fuel taxes are not ear-marked for road expenditures).

* In calculating these ratios, all consumption rates are the same as discussed earlier, except for consumption rate for private farm trucks, which is estimated to be 1.17 and 0.95 gallons of gasoline per one thousand bushel-miles in Manitoba and Alberta respectively (equivalent to 17,800 and 22,450 pounds loaded direction g.v.w. respectively).

Energy Implications of Rail Line Abandonment

Comparative modal energy efficiencies developed in the previous section of this report contribute significantly to differences in total energy requirements of various rail-truck combinations which might be considered in any part of the grain handling and transportation system. Three factors were identified to account for variations as well:

- 1) variations in the average size of farm trucks between areas;
- 2) variations in the mix of commercial, custom and private farm haul between specific cases; and
- 3) variations in the extent of rail and truck circuitousness between specific cases.

Two specific cases were analyzed to determine the energy effects of change in an area upon removal of a branch line: (Table VIII-7).

1) The Brandon Area

This case considered the removal of 270 miles of light traffic density rail lines in the area northwest of Brandon. Changes in energy consumption were considered for both direct haul by farm truck from farms to closest elevators retaining rail service and for hauling from farm to the same alternate elevators by commercial trucks.

In both cases, of course, there was a saving in fuel consumed by the rail mode. It was found that with private farm trucking from farms to alternate elevators, the overall fuel

consumption increased by about 25 thousand gallons per year whereas by direct commercial trucking to on-line elevators, there was a net saving of 26 thousand gallons per year over the existing rail and elevator system.

2) The Carlton Area

This case considered closure of Canadian National's Carlton Subdivision, with detailed totalling of energy consumption changes for two different methods of operation in the area. In the first scheme of operation, grain would be delivered to the closest alternate on-line elevator by private farm truck, but in the second method of operation, grain was considered to continue moving to existing elevators by farm truck with commercial trucking from elevators on the abandoned line to closest alternates. All grain was considered to be routed through Langham Junction as a common point for furtherance in each operation.

It was interesting to note that in the first scheme with a shift of only about one percent of the affected handlings to the Blaine Lake Subdivision, the resultant extra circuitous routing produced nearly 27 percent of the total increased bushel-mile haulings for rail from all points experiencing increased handlings. This relatively small increase in circuitous routing then practically wiped out possible savings in rail fuel consumption which were brought about by direct trucking of grain to points closer to Langham Junction.

It was found that with private farm trucking to alternate elevators, the overall fuel requirement associated with grain assembly in the area would increase by about 12.4 thousand gallons per year, continued operation of off-line elevators with commercial trucking to on-line points resulted in an increase of 8.3 thousand gallons in fuel consumed per year.

Table VIII-7 summarizes the results of the various rationalization schemes and provides information on the changes in provincial and Federal fuel tax revenues and relates fuel cost savings or increases to bushels of grain delivered in the area.

Summary of Findings

From the results of the analysis of these specific rationalization scenarios, several observations can be drawn:

Firstly: For many of the branch-lines the effects of abandonment on fuel consumption requirements of the railways will be relatively minor.

To illustrate, abandonment of 270 miles of track in the Brandon area would decrease fuel consumption associated with related rail grain assembly by about 13 thousand gallons per year, or one-half of the quantity of fuel consumed by a typical five-axle commercial highway truck in a year. Abandonment of the Carlton Subdivision would reduce railway fuel requirements by a quantity of fuel which is less than that consumed by one typical automobile in a year.

There are two basic reasons for this. Firstly, the energy efficiency rate for rail is relatively high. Accordingly, large

TABLE VIII-7
RESULTS OF RATIONALIZATION SCHEMES IN THE BRANDON AND CARLTON AREAS

SCENARIO	CHANGE IN FUEL CONSUMPTION BY MODE - GALLONS			NET CHANGE IN FUEL USED	CHANGE IN FUEL COST RELATED TO GRAIN IN AREA	FUEL TAX REV. GOV'T GAIN OR LOSS (\$)	
	Rail Diesel Fuel	Farm Truck Gasoline	Commercial Truck Diesel Fuel			Federal	Provincial
BRANDON AREA							
Direct Haul by farm truck to the closest elevators retaining rail service	-13,300	+37,700		+24,400 Gal. +\$12,570	+1/16 ¢/Bu.	+ 980	- 660
Direct Haul by commercial truck to the closest elevators retaining rail service.	-13,300	-44,400	+31,400	-26,000 Gal. -\$6,370	-1/32 ¢/Bu.	-1,050	+5,930
CARLTON AREA							
Direct haul by farm truck to the closest elevators retaining rail service	- 250	+12,600		+12,400 Gal. +\$5,170	+1/3 ¢/Bu.	+ 480	- 890
Farm truck haul to original elevators and commercial trucking from these "off-line" points to closest elevators retaining rail service	- 950		+ 9,250	+ 8,300 Gal. +\$5,200	+1/3 ¢/Bu.	+ 310	+1,440

changes in bushel-mile haul must be experienced to effect significant quantity adjustments. Secondly, for many of the specific branch-line cases, traffic would be re-directed from the abandoned line to effectively paralleling lines, tending to minimize changes in bushel-mile rail haul. Of course, isolated cases of highly circuitous rail routing would not fall into this pattern.

Secondly: Given abandonment and the continued extensive employment of small private farm trucks, consumption could increase substantially, but would not necessarily do so.

In the case of the Brandon area, where current haul distances are short, extensive abandonment produced a net fuel increase equivalent to the amount of fuel consumed by one typical commercial highway truck in a year. In areas where the proximity to alternative rail lines is less, greater effect, of course, would be observed.

Thirdly: Given abandonment, the increases in fuel requirements which would be experienced by attendant increases in private farm truck haul could often be more than offset by shifting grain haul to large commercial trucks.

An objective of energy conservation in grain assembly could be oft times better served by encouraging shifts from the small private farm trucks to large trucks, in place of continued encouragement of the extensive employment of small private farm trucks. As was illustrated for the Brandon area, fairly extensive branch-line abandonment, if accompanied with wide-scale employment of large trucks, can produce overall fuel savings.

Fourthly: The government revenue implications of changes in fuel consumption effected by rationalization are relatively minor. Nonetheless, it is interesting to note that provincial governments in particular can stand to gain revenue as a result of shifts from private farm truck haulage to commercial truck haulage of grain. As illustrated for the Brandon area, this gain in provincial revenue can occur even under circumstances wherein overall fuel consumption decreases.

As an overall general comment, it is reasonable to observe that the magnitude of the energy implications of many of the rationalization options, particularly when accompanied with increases in the employment of large trucks in the place of small trucks, would be very minor, and indeed so small as to be effectively immeasurable and unpredictable. If energy conservation onto itself is to be viewed as an important argument favouring the retention of branch-lines, then in the same simplistic way, one should also argue, more strongly, for a significant shift from small private farm truck haul to large commercial truck haul of grain in the initial farm to elevator move. The first position only constrains growth in consumption, while the second position could effect decreases in consumption.

Energy in Perspective: Food, Fuel and the Farm

The introductory section of this Chapter and the section on Energy Resources and Consumption acknowledged current concern with regard to availability and use of energy and confirmed the need for

conservation of petroleum. Subsequent commission research findings with regard to fuel use in grain transportation were outlined in the sections dealing with Energy and Grain Transportation, Fuel Costs and Grain Transportation in Western Canada and Energy Implications of Rail Line Abandonment. This analysis demonstrated that there is no definite correlation between retention or rail service for local grain collection and the minimization of fuel consumption for the area presently served by rail. One might now ask, "What, then, is the potential for fuel savings within agricultural production and how does this relate to energy consumed in transportation of the product?"

Traditional agriculture, characterized by self-sufficient farming communities using solar-powered technology, produced about one thousand pounds of food grain per acre per year.* The most efficient agriculture from an energy standpoint is this type of system in which each person grows and processes his own food. This is also the least productive system with respect to yield per acre and per unit of labour input.

Structural transformation of agriculture has permitted a three to four fold increase in efficiency with yields in typical mechanized North American grain cropping ranging from two thousand to six thousand pounds per acre on average. This improvement has resulted, however, in a more energy intensive operation largely due to requirements of mechanization and other inputs such as fertilizer and pesticides. It has been estimated that on a strict grain heat unit value

* Chancellor, William J. and Goss, John R. Balancing Energy and Food Production: 1975-2000. Agricultural Engineering, January 1976.

basis, for example, the ratio of energy output to input for corn production in the United States has decreased from 3.7:1 to 2.8:1 since 1947.*

Present world food demand and supply relationships and forecasts of population point to the need for more, rather than less, mechanization and modernization of agriculture. One must be careful, however, in concluding that such upgrading of production techniques should be limited or significantly altered because of the increase in relative energy consumption which normally accompanies such advances. Discussion of energy conservation within any sector of the economy should take place with full cognizance of the relative magnitude of consumption in society at large. For example, the U.S. Council for Agricultural Science and Technology estimated that field and farm production accounted for only about 1.5 to 3.0 percent of that country's energy consumption.

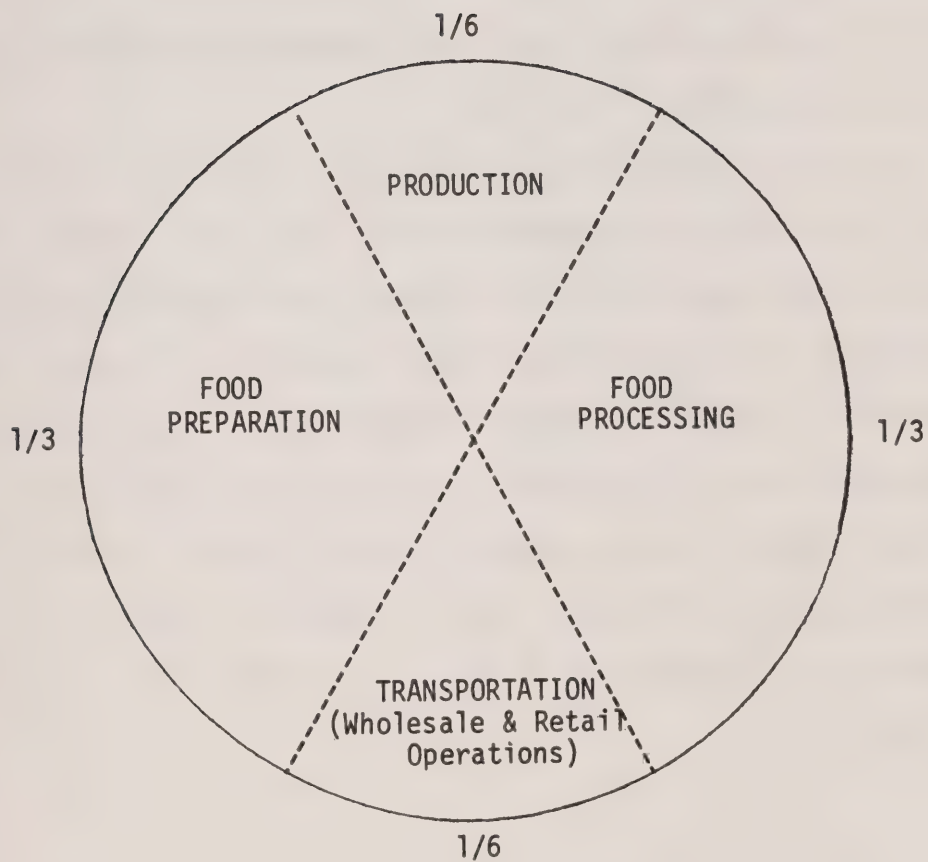
Further analysis of energy consumption in the food chain provides some insight into the relative potential for savings. Figure VIII-6 illustrates results of current compilation of data for North American conditions. It is interesting that production and transportation each account for approximately one-sixth of the energy which goes into food for human consumption.

In consideration of prairie agriculture and grain transportation, it is perhaps more relevant to quantify and compare fuel consumed in the production of a bushel of grain and the fuel required to trans-

* Hall, Carl W. Energy and Agricultural Engineering. Agricultural Engineering, March 1975.

FIGURE VIII-6

FOOD ENERGY INPUT FROM FIELD TO TABLE
UNDER CONDITIONS OF MODERN TECHNOLOGY



port this same unit to port. A recent study* concluded that fuel consumption on Saskatchewan farms averaged about four gallons per cultivated acre. It is interesting to relate this value to production and the findings of this Commission's study of fuel consumption in grain transport. Analysis shows that farm fuel consumption accounts for approximately one-third of a gallon of fuel per bushel while transportation to port accounts for about one-tenth of a gallon per bushel with the truck portion of this total movement accounting for approximately one hundredth of a gallon.

Focusing on agricultural production, considerable energy savings can result from better management at the farm level. Changes from gas to diesel powered equipment combined with improved operation, maintenance and design of agricultural equipment will reduce fuel consumption. Better matching of tractor power to load, proper field adjustments and shifting up one or two gears with reduced engine revs to obtain desired travel speeds on lighter loads all result in lower fuel requirements. There may also be significant potential for fuel reduction by future changes in cultural practices such as reduced tillage.

* Bigsby, F. and Strayer, R. Agricultural Engineering Department Study. University of Saskatchewan, 1976.

CHAPTER 9

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT

In conducting a comprehensive evaluation of regional transportation requirements, this Commission has been instructed to consider the implications of adjustments to the grain handling and transportation system as they relate to economic development opportunities in terms of agricultural processing, manufacturing and natural resource development. In its analysis of specific regional transportation requirements, the Commission has given weight to provincial economic plans and forecasts and to the location of potential industries in making recommendations regarding the disposition of specific rail lines.

A recurring concern expressed at numerous public hearings has been the detrimental effect of discriminatory freight rates and other transport related distortions affecting the economic development of the Prairie region. An analysis of freight structures confirms that the prairie provinces have been victimized by discriminatory freight rates from the beginning.

The current review of the grain handling and transportation system has provided the Commission with an opportunity to observe not just the grain handling and railway system but to see all of Western Canada in true perspective, to visit with and listen to thousands of farmers, small town merchants, municipal officials and youth.

The Commission emerged from this undertaking with a feeling of great faith in the future of Western Canada. The optimism of the pioneers persists undiminished but the Commission sensed frustration

and disappointment by many Western Canadians in Western Canadian development. Feelings exist that Western Canadians are the source of someone else's affluence and to a degree they blame the transportation system for their frustrations.

Transportation in Western Canada is a most important component of its economic and social structure. It has since before Confederation been an instrument of public policy and a tool of development. The rapid settlement of Western Canada was attributable to the federal government's grants of land and railway building franchises to colonization companies as well as to railway companies to provide access to the hinterlands. These developments were aimed at taking advantage of the great resources of Western Canada. Since early development the thrust has been to move raw materials to industrial Central Canada for refinement and consumption.

In the early days of labour intensive agriculture the population of Western Canada exploded and communities prospered as the needs of the developing area were met. However, as agriculture settled into permanency, as the more productive areas took on stability and the less productive areas were vacated, the nature of Western Canada's community structure changed. The application of technology to agricultural production allowed expansion of farm size and a decrease in farm labour. The products of agriculture have continued to flow out of Western Canada in their raw form. Therefore employment opportunities and opportunities for population expansion in Prairie Canada have not kept pace with the expansion in the rest of the country. The

transportation system which was developed to open the West has served well but some of the policies associated with transportation have permitted the system to continue to drain the West of employment and development opportunities.

The continuous shift of an ever increasing proportion of the population to urban central Canada has been aggravated by the retention of policies which favour maintaining the west as a source of raw goods, and carrying out processing next to the populous centres of the East.

All Canadians have been the beneficiaries of low rate transportation policies over the years which have allowed Western grain producers to compete in the international market. Grain exports have been a leading contribution in Canada's international balance of payments. However, there is little doubt that Canada has paid dearly and will continue to increasingly pay for the pitfalls of the policy which shifts the development of secondary processing from the natural advantage areas to the high cost areas of the country.

The transportation of raw agricultural products, wheat, feed grains, malting barley, and oil seeds, constitute many more ton miles of freight haul than would be the case if secondary processing took place close to the source of production.

Examples of transportation related distortions are referred to later in this chapter.

This waste of essential transportation services is a great cost to all Canadians. The dislocation of secondary agricultural processing caused by inequitable policies has in part been responsible for the

fact that Western Canadian communities are empty of people and opportunities to the frustration of many Western Canadians. These regional disparities of economic opportunity will continue to grow unless more deliberate efforts are made to reduce them. One of the most logical tools for the achievement of this end is the transportation system. It is through this system that the advantages of concentration of a product or secondary processing in Western Canada must be encouraged for the benefits of all Canadians. In the case of domestic movement of agricultural products the Commission recommends that a reversal of transportation policy be considered wherein all unnecessary transportation of goods be avoided and the most efficient mode of transport be used for each commodity. In principle, therefore, the first item deserving of attention in the establishment of transportation policy relating to agricultural products would be a freight structure in which the processed product in its concentrated form should cost no more to transport on a per ton basis than the same product in its raw state.

In this report the Commission is putting forth a series of recommendations all aimed at enhancing the efficiency and effectiveness of the transportation system in Western Canada. The Commission is aware that national transportation policies along with changes in the system are necessary if Western Canadians are to fully share in our national developments. The Commission is recommending physical and institutional changes to the system. Policy changes are the responsibility of government.

In this chapter, the Commission comments on why processing plants locate where they do, freight rates and other transport related distortions as they affect flour milling, rapeseed crushing, livestock production and processing, and the malting industry.

In its examination of economic development of the Prairie region, the Commission subscribes to the following principles:

- 1) The Prairie region of Canada is basically an exporting region, and hence a major contributor to Canada's favourable balance of payments position. Current and future transportation policies should not detract from this position but should recognize its importance in the national interest.
- 2) The production and processing of agricultural products should take place in regions which enjoy natural locational advantages for such activities. Freight rates and other transport related policies should not destroy these natural locational advantages.

Why Processing Plants Locate Where They Do

Industries may be divided into three groups depending on the type of location decisions that they make. Industries are said to be input-oriented if in the long-run they locate new processing capacity near the source of inputs (materials, energy, labour, water, etc.). Similarly, industries are said to be market-oriented if new capacity is located near potential markets. The third type of industry is one that is tied neither to input sources nor the market and is called foot-loose.

There usually exists some natural advantage in locating a firm in some areas over others. For example, a manufacturing firm located

near the source of inputs for its product has a locational advantage if:

- 1) the manufacturing process involves a significant weight decrease,
- 2) the freight rates are higher for the raw material than for the product,
- 3) the process results in a product which is easily stored and transported, or
- 4) by-products of the process are more profitably disposed of at that location than at another.

If the reverse conditions exist for an industry, then those firms located near the market will have a locational advantage.

Firms in some industries have natural locational advantages if they are located near a cheap or abundant source of inputs (other than raw products). Many industries, for example, must be situated near a source of specialized labour, or abundant water.

Locational advantages are not static, however. A number of factors tend to increase or decrease the locational advantages of an area. Some of these factors include:

- 1) changes in technology in the processing industry,
- 2) changes in technology in the transportation industry,
- 3) changes in the freight rate structure,
- 4) changes in market demand,
- 5) changes in supply of raw materials or other inputs,
- 6) changes in government regulation of the industry, and/or
- 7) changes in subsidy levels or qualifications.

In the short run when capacity cannot be increased, decreased or relocated, changes in the determinants of locational advantage will affect, instead, the profitability of firms. The effect of these changes will vary with the location of the firms in the industry, improving the profitability of some relative to others.

Also, there are 'natural' locational advantages as opposed to 'created' locational advantages. Any variation from a 'natural' locational advantage is a distortion. It is difficult to define distortions resulting from freight rates and transport policies because of the long standing nature of policies such as statutory rates on grain and Feed Freight Assistance. For many people, these policies are 'natural' rather than being distortions. Despite the difficulties involved in describing the 'natural' competitive environment of many industries, it is possible and indeed very useful to explore the effects of certain 'distortions' (or groups of 'distortions') on the locational advantage of firms. However, it should be kept in mind that the remainder of this chapter considers only freight rate and other transport related distortions, and not any of the other factors that may lead to changes in the location of agricultural processing.

The Flour Milling Industry

Canadian flour production has declined some 30 percent from its peak of 56 million hundredweight in 1946-47 to 39 million hundredweight in 1974-75. At the same time, a significant shift has taken

place in the location of flour production in Canada. In the mid 1950's approximately 52 percent of the flour produced in Canada was milled east of the Lakehead. In 1974-75 these market shares had shifted to 69 percent milled in Eastern Canada and 31 percent milled in Western Canada.

TABLE IX-1
MILLINGS OF WHEAT BY EASTERN AND WESTERN MILLS

Year	Millions of bushels milled			% Milled	
	East	West	Total	East	West
1954-55	44.2	48.2	92.4	47.8	52.2
1955-56	44.3	47.5	91.8	48.3	51.7
1956-57	42.6	42.5	85.1	50.0	50.0
1957-58	46.8	45.4	92.3	50.8	49.2
1958-59	45.8	44.3	90.1	50.9	49.1
1959-60	44.4	46.9	91.4	48.6	51.4
1960-61	43.1	46.6	89.7	48.0	52.0
1961-62	43.9	44.4	88.2	49.7	50.3
1962-63	44.5	34.3	78.8	56.4	43.6
1963-64	51.9	59.7	111.6	46.5	53.5
1964-65	49.3	37.9	87.2	56.5	43.5
1965-66	52.3	45.6	97.9	53.4	46.6
1966-67	51.6	38.5	90.1	57.3	42.7
1967-68	49.3	35.5	84.8	58.1	41.9
1968-69	55.0	30.0	85.0	64.7	35.3
1969-70	60.9	29.6	90.5	67.2	32.8
1970-71	59.9	27.5	87.4	68.5	31.5
1971-72	60.3	27.8	88.1	68.5	31.5
1972-73	60.2	26.1	86.3	69.7	30.3
1973-74	59.5	25.1	84.6	70.3	29.7
1974-75	61.2	27.7	88.9	68.9	31.1

An examination of the milling industry in Canada - "Transportation Related Distortions in the Canadian Flour Milling Industry" - Volume II,

suggests that the industry may be quite market-oriented for the domestic use of flour but that for export flour, the mills located near the raw material have a locational advantage. Since Western mills have traditionally produced flour for the export market, and since this market has declined significantly, there has been a disproportionately higher amount of over capacity in the Western mills.

The Commission found through its study of this industry that the application of certain government programs, of Canadian Wheat Board selling practices, and of ancillary rail charges offset the natural geographic advantage Western mills should enjoy.

When Western mills receive wheat from primary elevator companies, the Canadian Wheat Board collects on behalf of the grain company a three cent per bushel 'diversion charge' in lieu of terminal elevator revenues. This charge was recently renamed a 'selection' charge. Mills are required to pay an additional 1.5 cents per bushel if the wheat they secure contains less than 1.0 percent dockage. Eastern mills do not pay any of these charges.

One of the natural or locational advantages of locating a flour mill near the source of wheat is the reduced need for storage. The inventory requirements of a Western mill are less than one month's grind. Eastern mills on the other hand require higher storage levels. At the close of navigation in the St. Lawrence Seaway, Eastern mills will require as much as six months' supply of wheat on hand. Since the Canadian Wheat Board pays storage and carrying costs, the Western

grain producer pays the cost of equalizing the storage and carrying costs of Eastern and Western mills.

The instore Thunder Bay price for wheat includes a number of costs which the Canadian Wheat Board incurs. These costs are associated with the services rendered by the Canadian Wheat Board and include inspection, freight, terminal elevation, cleaning and the Canadian Wheat Board administration costs. Western mills buy wheat at this price less freight. They must therefore pay for the other services despite the fact they do not receive them. This is indefensible.

The railways charge 18 cents per hundredweight stop-off fees on domestic flour shipments. Western mill rail origins of wheat milled and forwarded as domestic flour are subject to this 18 cent charge. Eastern mills receiving their grain supplies by water from Thunder Bay do not pay this charge. Both Eastern and Western mills are subsidized for stop-off charges on export flour. By virtue of section 329 of the Railway Act, the Federal Government made statutory a three cent per hundredweight Eastern stop-off charge. Stop-off charges in the West have not been frozen by statute. In the West the railways have been free to establish stop-off charges at whatever level they wished. In 1973 the Federal Government, recognizing the discriminatory effect of the frozen eastern stop-off charge implemented a stop-off rebate. This rebate amounts to 7.5 cents per hundredweight of export flour from Western mills. The net result is the Eastern mills are subsidized 15

cents per hundredweight, the Western mills, 7.5 cents per hundred-weight.

The Commission recommends:

- 1) That the flour milling industry in Canada be permitted to enjoy the natural geographic advantage of locating in Western Canada.
- 2) That the Canadian Wheat Board re-assess its costs of services performed for this industry and to ensure that its pricing practices do not distort the regional locational advantages of this industry.
- 3) That the Canadian Wheat Board discontinue the discriminatory practice of paying interest and storage costs on wheat held for milling at any point in Canada.
- 4) That the railway stop-off charge for storage and milling of grains in Western Canada be eliminated.

The Rapeseed Crushing Industry

Rapeseed production in Western Canada grew from scant beginnings in 1943, at which time there was a planting of around 4,800 acres to a substantial 4.3 million acres in 1975 and a crop of 77.1 million bushels (Table IX-2). By 1975, rapeseed represented seven percent of the total Canadian crop acreage and was the most important Canadian oilseed. The 1976 acreage, however, plunged to around 2.0 million acres, largely due to a substantial carryover of 42.3 million bushels of rapeseed from the previous crop year, large stocks of U.S. soybeans, and resulting lower price expectations.

Demand for rapeseed results mainly from export demand and from domestic crushing requirements. Exports of raw rapeseed have been sizable and in 1975-76 amounted to 30.1 million bushels. This represented 39 percent of the 1975 rapeseed production. Domestic crushing of rapeseed represents the next largest source of demand for Canadian rapeseed. 1975 crushing amounted to 14.0 million bushels. The bulk of this crushing is for domestic purposes. Exports of rapeseed products have not fared as well as those of the raw seed; exports of both oil and meal have been relatively low and declining. Oil exports amounted to 43.7 million pounds, and oilcake and meal exports were 45.6 million pounds in the 1975 calendar year (including concessional or aid shipments). Preliminary estimates for 1976 suggest that crushings and exports will be somewhat higher.

Aside from a small amount of rapeseed crushing by a now defunct Montreal plant, all Canadian rapeseed crushing has occurred in the

western provinces. These western crushers, however, are dependent on the eastern Canadian market as an outlet for rapeseed meal and oil. It is estimated that 75 percent of the 1975 rapeseed crushings were marketed in Eastern Canada, and the remaining 25 percent was exported or utilized in Western Canada.

TABLE IX-2
Canadian Rapeseed Acreage, Supply and Disposition
(1965 - 1976)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	..... millions				bushels		.....				
ACREAGE	1.4	1.5	1.6	1.1	2.0	4.1	5.3	3.3	3.2	3.2	4.3	2.0
SUPPLIES												
Stocks (Aug. 1)	1.3	3.3	6.0	9.7	5.3	3.7	11.0	43.1	20.7	12.4	17.6	42.3
Production	22.6	25.8	24.7	19.4	33.4	72.2	95.0	57.3	53.2	51.3	77.1	41.4
Total	23.9	29.1	30.7	29.1	38.7	75.9	106.0	100.4	73.9	63.7	94.7	83.7
EXPORTS	13.6	13.8	12.3	14.3	22.2	46.8	42.6	54.0	39.2	26.1	30.1	
DOMESTIC DISAPPEARANCE												
Crushings	3.7	5.0	5.2	6.9	7.8	8.6	12.0	15.6	14.7	12.2	14.0	
Seed Dockage etc.	3.3	4.3	3.5	2.6	5.0	9.5	8.3	10.1	7.6	7.8	8.3	
Total	7.0	9.3	8.7	9.5	12.8	18.1	20.3	25.7	22.3	20.0	22.3	
STOCKS (July 31)	3.3	6.0	9.7	5.3	3.7	11.0	43.1	20.7	12.4	17.6	42.3	

There are five crushing and processing plants presently in operation in Western Canada, all of which are devoted almost exclusively to the crushing of rapeseed and the production of crude or refined rapeseed oil. Present total crushing capacity is in the order of 3,400 tons per day, or slightly more than one million tons per year. Three more crushing plants are in various stages of construction and will further increase capacity by 1,920 tons per days or 576,000 tons per year. 1975-76 rapeseed crushings represented a utilization of only 52 percent of capacity, ignoring the fifth plant which was brought into operation in the spring of 1976. Even conceding the crushing of the entire sunflower crop and small amounts of soybeans, there is no problem of insufficient crushing capacity in the West. Indeed, temporary shut-downs and the suspension of contracting for acreage throughout much of 1976 indicate that overcapacity has become a serious problem.

The major transport related restrictions on the movement of the rapeseed derivatives centre on the transport rates, in particular, on the level of rates and the transport rate differential. The level of the transport rates on rapeseed, rapeseed oil and rapeseed meal have been the subject of some concern in recent years. In July, 1945, the statutory rates were extended to include the early products of rapeseed processing, rapeseed meal oil cake and rapeseed oil cake. In August, 1961, the statutory grain rate was extended to cover rapeseed, rapeseed screenings and rapeseed meal transported to Thunder Bay, and was extended only to rapeseed to Vancouver for export.

Beyond Thunder Bay, rapeseed for export was allowed the export grain rate.

Domestic rapeseed destined for eastern crushing was allowed an extraordinarily low water-competitive rate of 42 cents per 100 pounds in 1970, or 44 cents per 100 pounds, effective 1971. Rapeseed meal was allowed the transit privilege and the statutory rate to Thunder Bay, but was subject to the relatively high commodity rates beyond. Oil, however, which has been the rapeseed derivative of primary economic concern, travelled entirely under agreed rates. The application of the higher rates to meal and oil, when contrasted to the total through-rate allowed the eastern crusher, placed the western crusher at a severe disadvantage which was not related to location, as determined by the Canadian Transport Commission in 1973. The 1973 Canadian Transport Commission Decision narrowed the differential between the rates on the seed and the total rates on the equivalent oil and meal movement by applying the same rate to rapeseed meal as to raw seed east of Thunder Bay, and by freezing the agreed rates which applied to the oil movements.

The freight rate differential still exists, however, as the following examples from the Perkins study* illustrate. The cost of moving 100 pounds of rapeseed from Lethbridge to Montreal was a combination of the statutory rate to Thunder Bay (26.5 cents per 100 pounds)

* P.R. Perkins, An Economic Review of Western Canada's Rapeseed Processing Industry, November, 1976, p. 89.

and the commodity rate beyond (44 cents per 100 pounds) for a total of 70.5 cents per 100 pounds. The cost of moving the equivalent amount of oil and meal is calculated to total 90.2 cents. The disparity between the freight rates on the processed versus the raw product is 19.7 cents. Using Vancouver as a destination, the cost of moving 100 pounds of rapeseed for export from Lethbridge was 23.5 cents per 100 pounds. The cost of moving the equivalent amount of oil and meal (41 pounds of oil at 85.0 cents per 100 pounds and 57 pounds of meal at 51.0 cents per 100 pounds) is calculated to be 65.9 cents per 100 pounds. The disparity between the processed versus the raw product is 40.4 cents in this case. This disparity is intensified because meal to Vancouver (unlike to Thunder Bay) moves at rates considerably higher than statutory rates. Although some of the rates on rapeseed meal and oil have changed as a result of the Canadian Transport Commission Order R23976 on November 26, 1976 (which established rates at "minimum compensatory levels"), the basic disparities still remain.

The disadvantage to the western crusher as a result of the freight rate structure is not limited to this simple rate differential. Further disadvantage arises from the effect which the freight rate has upon the pricing system. The price which western crushers pay for raw rapeseed is determined by the Vancouver market minus the low statutory rate to Vancouver (the Altona plant is generally the only plant to purchase rapeseed on the basis of Thunder Bay). The prices for rapeseed meal and oil, however, are determined by the Toronto market in conjunction with Chicago

soybean markets. The price which the western crusher receives is based on the eastern price, minus the relatively higher freight rates eastward. The "market disparity" which then arises is calculated to be the difference between the product equivalent of 100# of seed (90.2 cents) and the statutory rate on seed to Vancouver (23.5 cents) for a "market freight cost disparity" of 66.7 cents on the Lethbridge to Montreal movement.

There are two major transport related charges which the crushers must pay in addition to the cost of movement, and there is, in addition, a premium or allowance which the railway grant the crushers. Inasmuch as these charges and allowance differ from that which is levied on other users of the railway system, they must be construed as discriminatory. There is a charge of 14 cents per 100 pounds which is levied by the railways on the movement of rapeseed meal in hopper cars. This charge is not applied to the movement of soybean meal into or within eastern Canada. Crushers must supply the tank cars for the movement of rapeseed oil. Tank cars may be purchased or leased at a charge of approximately \$450 per month (jumbo 75 ton tank car). The railways allow the rapeseed crusher 9.5 cents per loaded mile, although other shippers are allowed 12 cents per loaded mile for the use and provision of these cars.

On April 13, 1976, Order-in-Council, P.C. 1976-894 decreed that all rates on the movement of rapeseed oil and meal from the four western plants (Altona, Nipawin, Saskatoon, and Lethbridge) which had appealed the previous rate structure, were to be increased

to the "minimum compensatory level". The Federal Government had for some time been advocating a cost-based system of freight rates with the principle of "user pays". Transport rates on rapeseed, rapeseed oil and meal, had been effectively frozen at historical levels which bear little relation to the costs of service which the railways claim and which have been substantiated by the Commission on Rail Costing (Snaveley Commission) to be 2.58 times the statutory rate. Implementation of the April 13 Order was delayed to await the finding of the Snaveley Commission. The "minimum compensatory" rates were to come into effect after October 30, 1976, although in the interim, the existing rates were extended as of August 1 to the Lloydminster plant. On November 26, 1976, the Canadian Transport Commission issued Order No. R-23976 which established these "minimum compensatory" rates. However, this Order has been appealed by western rapeseed crushers.

A \$2.5 million federal program for the subsidization of western rapeseed processors was also proposed. On November 26, 1976, the Federal Transport Minister indicated that the plan would provide some \$500 thousand in the current fiscal year, with the balance available in the 1977-78 fiscal year. The purpose of this subsidization is to minimize the initial impact of the "minimum compensatory rates" on the movement of rapeseed derivatives.

The Commission recommends:

- 1) that freight rates on rapeseed and its derivatives be set at levels which do not discriminate against

the natural locational advantage of Prairie rapeseed crushers;

- 2) that inequities in freight rates, such as those that exist on the movement of rapeseed meal through Vancouver and Thunder Bay, be eliminated;
- 3) that the railways eliminate the additional charge of 14 cents per 100 pounds levied on the movement of rapeseed meal in hopper cars;
- 4) that the railways provide the same mileage allowance for tank cars used by rapeseed crushers as they do for other shippers;
- 5) that the Federal Department of Industry, Trade and Commerce devote more effort to export market development for rapeseed meal and oil.

Livestock Production and Processing*

-- Livestock Production

The number of cattle slaughtered in Canadian inspected establishments totalled 3,676,000 in 1976 and this represented a 36 percent increase over the figure 10 years earlier in 1966. The number of slaughterings did not show any increase in the late 'sixties and even by 1974 slaughterings were only nine percent above the 1966 figure. The economic returns from the production of beef cattle have, of course,

*Much of the factual material in this section on livestock production and freight rate comparisons is taken largely from a report entitled Transportation Factors and the Canadian Livestock and Meat Industries: An Updated Summary which was prepared by Dr. John Heads of the Canadian Transport Commission in February, 1977. The conclusions and recommendations are the responsibility of the Grain Handling and Transportation Commission.

been very depressed over the last two years and the number of slaughterings increased by 13 percent in 1975 and by 10 percent in 1976.

In 1976, British Columbia, Alberta, Saskatchewan and Manitoba accounted for 62.7 percent of total Canadian cattle slaughterings, as against 56.6 percent in 1966. The western share of Canadian cattle slaughterings was increasing during most of this period. Alberta is the most important cattle producing province and its share of Canadian slaughterings was 42 percent in 1976 as against 30 percent ten years earlier. This increase of 12 points in the Alberta share was offset by a decline of six percentage points in Ontario and a similar decline of six percentage points in the three other western provinces.

The slaughter of calves is much less significant than the slaughter of cattle. In 1976, the total slaughter of calves in Canadian inspected establishments numbered 655 thousand, equivalent to little more than one-sixth of the slaughter of cattle. The slaughter of calves was declining each year from 1966 to 1973, but showed some increase in 1974. As a result of low economic returns from the production of beef cattle, calf slaughterings increased very substantially in 1975 and remained close to this level in 1976. Nevertheless, the total 1976 slaughter was still 14 percent less than a decade before.

The Canadian calf slaughter is heavily concentrated in Quebec, which accounts for over three-fifths of the total. Western Canada

accounted for only 15 percent of Canadian calf slaughterings in 1976 and this was less than its 1966 share of 25 percent.

The number of hogs slaughtered in Canada was 7,491,000 in 1976 and this represented an increase of 22 percent on the figure for 1966. However, hog production fluctuates from year to year and the 1976 slaughter was in fact only marginally above that recorded in 1967. Following the difficult economic conditions in grain farming in the late 'sixties', the slaughter of hogs peaked in 1971. Hog slaughterings showed a particularly large decline of 14 percent in 1975 with a further decline of two percent in 1976.

Hog production was always much less concentrated in Western Canada than cattle production and in 1966 the four western provinces accounted for just under 40 percent of total Canadian hog slaughterings. The western share peaked at 48 percent in 1971, but by 1974, it was back to 43 percent. In 1975, this share fell to 36 percent, which was the lowest figure recorded in the previous decade, and by 1976 it was down to 33 percent. British Columbia slaughterings were negligible in 1976, while Alberta slaughterings were less than a decade before. Although slaughterings had increased in Saskatchewan and Manitoba, the large shift in hog production had been to Quebec, which accounted for 31 percent of the Canadian total in 1976 against only 17 percent in 1966.

Movements of Livestock and Meat from Western Canada to Eastern Canada

The movement of cattle and calves from Western Canada to Eastern

Canada is substantial. According to Agriculture Canada Livestock Market Review estimates, the number of cattle and calves moving by rail from Western Canada to Eastern Canada was 512 thousand in 1974 and 626 thousand in 1975. Provisional figures for the rail movement in 1976 show this down to 415 thousand. In 1974, slaughter cattle accounted for 26 percent of the movement, feeder and stockyard cattle for 21½ percent, and calves for 52½ percent. This distribution of the movement would suggest an average weight per animal of approximately 625 pounds and hence a total 1974 movement of 160 thousand tons. Truck movements of fresh, frozen, cured and ready-cooked meat amounted to 157 thousand tons, thus making a total movement of approximately 330 thousand tons in 1974.

Thus, in 1974, the rail mode was only slightly more important than highway in the movement of meat from Western to Eastern Canada, while the movement of live cattle was predominantly by rail. Trade sources have indicated that a greater proportion of live cattle moved by highway in 1976 and that the highway mode has also increased its share of the meat movement.

On the basis of 1974 data, the rail movement of live cattle was predominantly to Ontario, which was the destination of 84 percent of total shipments by weight from Western Canada to Eastern Canada. Quebec received 14 percent of these shipments and the Atlantic provinces accounted for only two percent. The smaller movement of animals by highway was almost entirely to Ontario. Turning to meat, Quebec received 78 percent of the 1974 movement by rail from Western

Canada to Eastern Canada, against seven percent to Ontario and 15 percent to the Atlantic region. However, Ontario was rather more important than Quebec as a destination for the 1974 highway movement of meat. Considering rail and highway together, Quebec received 63 percent of total meat shipments from Western Canada to Eastern Canada, Ontario 27 percent, and the Atlantic region 10 percent.

The movement of 512 thousand cattle and calves from Western Canada to Eastern Canada in 1974 was equivalent to some 15 percent of total Canadian slaughterings. In 1975, this appears to have edged upwards to about 15½ percent.

Shipments of live hogs from Western Canada to Eastern Canada are unimportant. The movement by rail in 1974 was only some two thousand tons and the highway movement was shown as only slightly more than this. This would imply a total movement of no more than 45 thousand live hogs, equivalent to only 0.5 percent of the total Canadian hog slaughter.

-- Markets

The figures of Canadian slaughterings of Cattle, calves and hogs quoted above relate to domestic production plus imports less exports, so that there is no need to adjust these figures in examining the availability of meat produced in Canada. However, in 1975, Canada exported 224 thousand head of cattle against an import of 130 thousand. The net export of 94 thousand head of cattle was equivalent to some two and one-half percent of total Canadian slaughterings of cattle

and calves. The net export was considerably higher in 1976, amounting to 186 thousand head of cattle on January/October figures. Canadian imports of swine are confined to purebred stock and are negligible in number. The export of swine amounted to 31 thousand head in 1975, and 39 thousand in January/October 1976; there were considerable reductions on the 1974 figure of 197 thousand with the 1975 export equivalent to only 0.4 percent of Canadian slaughterings.

Canadian beef imports amounted to 64 thousand tons in 1975 and this was considerably in excess of exports of only 13 thousand tons. This net import of 51 thousand tons of beef was equivalent to five and one-half percent addition to total Canadian domestic production. Both imports and exports of beef showed sharp increases in 1976, but the net import in January/October 1976 was also 51 thousand tons. The Canadian import of pork in 1975 was 44 thousand tons, and the export, 41 thousand tons. The net import was therefore equivalent to only 0.5 percent of Canadian domestic production. As a result of sharply increased imports, the net import of pork increased to 34 thousand tons in January/October, 1976.

In 1975, Western Canada accounted for 27 percent of Canadian population and this was also roughly the Western Canadian share of total beef and pork consumption. However, it has been suggested that relatively few Canadian beef and pork imports go to Western Canada, while the prairie provinces provide a large proportion of Canadian exports. It can therefore be assumed that Western Canada perhaps consumes some 30 percent of Canadian beef and pork production.

Table IX-3 shows the estimated disposition of Western Canadian production of cattle and calves and hogs in 1975. Some 70 percent of Canadian cattle and calves originated in Western Canada and the flow of cattle, calves and beef to Eastern Canada was equivalent to some 40 percent of total Canadian production in 1975. It is estimated that some 15½ percent of this moved as live animals and the remaining 24 percent as beef; this means that the proportion moving live was perhaps some three percentage points higher in 1975 than in 1974. With the significant reduction in hog slaughterings in Western Canada in 1975, the net flow of hogs and pork to Eastern Canada was equivalent to only six and one-half percent of total Canadian production; in 1974, this was as high as 13 percent. The movement of hogs is negligible and virtually all shipments are in the form of meat.

TABLE IX-3 Production, Slaughterings and Flows Percentage Shares of Total 1975 Canadian Production		
	Cattle and Calves	Hogs
	%	%
Animals originating in Western Canada	69½	36½
Animals moving live to Eastern Canada	15½	½
Slaughterings in Western Canada	54	36
Of which, Western Canadian Utilization	30	30
Shipments as meat to Eastern Canada	24	6

--The Livestock Processing Industry

The modern packing plant works with assembly line precision converting livestock into meat. Plants may slaughter one or more species of livestock, but a different production line is required for each. A plant may process the carcasses into a wide range of consumer products or sale of carcasses may be made direct to the retailer, as is the common practice with beef. Another alternative is to sell carcasses to another plant for further processing.

At present, slaughter and chill plants predominate on the prairies. Most of the secondary process including cutting, boning, rolling, curing, smoking, tying and boxing are done in Eastern Canada. Of the processing operations mentioned, the capacity for slaughtering, chilling, cutting and boning constrain the output of most plants. Table IX-4 lists the percentage of slaughter capacity used in packing plants in 1974-75. As one would expect, production cycles lead to fluctuations in slaughterings. Only Ontario utilizes its packing plants to levels beyond 75 percent of capacity. British Columbia has the greatest excess processing capacity of any region with only 43.7 percent of cattle slaughter capacity and 24.6 percent of hog slaughter capacity being used. The Prairies and the Maritimes also are underutilizing the existing processing facilities in this comparison.

Table IX-5 shows the number of packing plants, the number of man-hours of work and the value added in slaughtering and meat processing. Of the 487 packing plants in Canada, 22 percent or 106 plants

were located in the prairie provinces. However, these same plants accounted for 31 percent of its value added and 31 percent of the total number of persons employed in the processing industry. There were fourteen more plants in 1974 than in 1973 with the majority of these plants being located in Ontario and Saskatchewan.

TABLE IX-4 Percent of Slaughter Capacity Used In Meat Packing Plants, 1974-75		
Region	Species	Jan. 1974 to July, 1975
Maritimes	Cattle	51.8
	Hogs	49.0
Quebec	Cattle	65.7
	Hogs	66.3
Ontario	Cattle	76.7
	Hogs	80.8
Prairies	Cattle	55.5
	Hogs	42.0
British Columbia	Cattle	43.7
	Hogs	24.6
SOURCE: J.L. Morris and D.C. Isler, <u>Processing Capacity in Canadian Meat Packing Plants</u> , prepared for Food Prices Review Board, August, 1975, P.4.		

TABLE IX-5									
Slaughtering and Meat Processors, Establishments									
Man-hours, and Value Added, 1965 and 1974									
	No. of Establishments			Man-Hours Paid Production Workers (thousands)			Value Added (Thousands of Dollars)		
	1965	1975	% increase	1965	1975	% increase	1965	1975	% increase
Maritimes	26	25	(4)	1,597	814	(49)	7,764	10,515	35
Quebec	129	134	4	10,427	11,759	13	60,500	134,267	122
Ontario	134	179	34	18,001	18,904	5	102,744	265,348	158
Prairies	73	106	45	14,016	15,507	11	80,064	207,295	159
B.C.	37	43	16	2,603	2,896	11	16,187	39,490	144
Total	399	487		46,644	50,608		267,259	668,035	
Prairies Share of Total	18%	22%		30%	31%		30%	31%	
SOURCE: Statistics Canada, <u>Slaughtering and Meat Processors</u> , 1965, 1974									

The location of a processing plant depends upon a number of factors including:

- a) freight rates on livestock, suspended meat and boxed meat;
- b) freight rates on by-products and the price difference of the by-products between regions;
- c) shrinkage;
- d) marketing costs; and
- e) financing.

The Feed Freight Assistance Program

At the start of World War II, the Government of Canada was faced with the problem of increasing livestock production because of overseas wartime demands. At that time, there were price controls, and large quantities of surplus wheat on the prairies. In 1941, legislation was introduced to encourage feed grain as opposed to wheat production, and under which a subsidy would be paid on the transportation of feed grains from the prairies to points in Eastern Canada and British Columbia. The essential objective of the program (even up to the present time) has been to bring about some form of regional equalization, or at least to reduce some of the regional variation, in feed grain prices in Canada through a subsidy.

Over the last 11 years, the annual volume of feed grains shipped under the program has ranged between 2.3 and 3.1 million tons. During the 1974-75 crop year, 2.8 million tons were shipped under the program. Total expenditures under the program have ranged from \$17.9 million to \$21.5 million during the last 11 crop years, with the expenditures being \$21.0 million in 1974-75. The average subsidy per ton of feed grain moved has ranged from \$8.13 to \$6.96 during the last 11 crop years; during the 1974-75 crop year, it was \$7.40 per ton. Historically, Quebec has been the major benefactor of the program in terms of tonnage shipped (about 50 percent) with Ontario, the Maritimes and British Columbia receiving 25 percent, 14 percent, and 11 percent respectively of the tonnage shipped.

The subsidy rates for various regions are established annually by

The Canadian Livestock Feed Board on the basis of minimum transportation costs for grain from Thunder Bay for regions east of Thunder Bay and from Western Prairie points for British Columbia regions. As a rule of thumb, these rates have been set at a level that reduces net freight costs to feed grain users from Thunder Bay or Western Prairie points to between \$4.00 and \$5.00 per ton for all regions. The importance of this subsidy can be illustrated with several examples. On feed grains moving from Saskatoon to the Toronto area, the average subsidy is 26.5 percent of the total freight costs; to the Montreal area, it is 46 percent; and from Edmonton to the Moncton area, it is 69 percent.

The general impact of a transport subsidy, such as the Feed Freight Assistance Program, can be postulated even without the aid of empirical evidence. Since the subsidy applies only to feed grains, and not to livestock or livestock products, it encourages the shipment of feed grains rather than livestock or livestock products from the Prairies to Eastern Canada and British Columbia. As a result, livestock production (and particularly feed lot operations) shift away from the prairies and closer to centres of consumption such as Toronto, Montreal, and Vancouver.

Groups affected by this program can be categorized into those favoring the continuation of the program (the "gainers") and those favoring its termination (the "losers"). The principal "gainers" include prairie feed grain producers, and Eastern and British Columbia livestock producers. The principal "losers" include prairie livestock

producers, prairie livestock processors, and Eastern and British Columbia feed grain producers.

Prairie feed grain producers, as a group, are in favor of continuing the Feed Freight Assistance Program because it provides them with an advantage in serving one of their markets for feed grains. However, this is a declining market as Eastern grain production and United States corn imports increase in importance. Understandably, livestock producers in Eastern Canada and British Columbia favor a program whose objective is to equalize feed grain prices in Canada, thus giving them an advantage in supplying meat to the larger domestic consuming centres. However, as mentioned above, the expansion of feed grain production in Ontario, coupled with the availability of United States corn, has made the continuation of the program less crucial to the economic health of the livestock industry in Central Canada.

Prairie livestock producers have argued that subsidized feed grain prices in Eastern Canada and British Columbia have reduced their ability to compete in the large Eastern and British Columbia consuming centres. Also, they contend that there has been a gradual shift of livestock production away from the Prairies which have the natural locational advantage. These effects have been further compounded by the application of domestic statutory grain rates on movements of feed grains from prairie points to Thunder Bay. The distortive effect in favor of Eastern livestock producers was

estimated by the Food Prices Review Board to be \$2.13 per hundred-weight for hogs and \$1.46 per hundredweight for feeder cattle.

The smaller local prairie livestock processors have complained that the program has brought about a decrease in livestock population on the prairies, and consequently fewer livestock for processing on the prairies. Eastern and British Columbia feed grain producers have objected to the dampening effects of freight subsidized feed grains on local feed grain prices. As an example, a \$15 ton freight subsidy on grain to Prince Edward Island reduces the price a Prince Edward Island farmer can get for his barley by 36 cents a bushel.

The question of what the actual impact of the Feed Freight Assistance Program has been on the Canadian economy generally, and the agricultural sector specifically, has been the subject of many debates and studies. The general consensus of most of these studies has been that the program should be terminated. Until fairly recently, such advice appeared to be unheeded by the Federal Government.

In August, 1973, Federal ministers, in outlining a new domestic feed grains policy for Canada, made reference to some possible modifications in the Feed Freight Assistance Program. These modifications included:

- 1) small initial reductions in Feed Freight Assistance in Ontario;
- 2) more general reductions to Montreal, accompanied by grain development programs for the East and British Columbia; and

- 3) a balancing of freight rates or assistance between grain and meat to ensure the development of agriculture according to natural advantages.

Nothing much happened until May 31, 1976, when the Federal Government announced its modified domestic feed grains policy under which domestic feed grains would be priced competitively with United States corn. Part of the modification included changes in the Feed Freight Assistance rates. Freight rate subsidies of \$6.00 per ton and less would be eliminated in Ontario and Western Quebec. In British Columbia, the subsidy would be reduced by \$4.00 per ton, while in Eastern Quebec and the Maritimes, the subsidy rates would remain unchanged due to a heavier reliance by producers on outside supplies of feed grains. The funds formerly used to pay the subsidy will now be used to expand storage facilities for feed grains in Eastern Canada.

Although it is too soon to assess the specific effects of these changes in feed freight assistance, some conjectures are listed below:

- 1) The elimination of freight subsidies in Ontario and Western Quebec and reduction in British Columbia should have minimal effects because of readily available United States corn and decreasing dependence on prairie feed grains;
- 2) there should be no effect in Eastern Quebec and the Maritimes, although some poultry and egg production might be attracted away from Western Quebec and Ontario over time;
- 3) there could be some softening of local prairie feed grain prices because of slightly diminished market opportunities, with a resulting expansion in prairie livestock production;
- 4) there is unlikely to be any significant gain in natural locational advantage to prairie livestock producers and processors unless new markets are developed either within Canada, the United States, or overseas.

Freight Rate Comparisons

Table IX-6 compares the freight charges incurred in shipping a 1,050 pounds slaughter steer from three representative Western Canadian points to Toronto and Montreal, the freight charges incurred from shipping the equivalent meat yield (550 pounds) and the freight charges involved in shipping a 500 pound feeder steer with 4,120 pounds of barley. The examination does not include the costs of shipping animals from rural points to local stockyards or packing plants in Western Canada.

TABLE IX-6					
Transportation Charges for Feeder Steers with Barley, Slaughter Steers, and Beef from Selected Western Points to Toronto and Montreal, 1976					
	Feeder Steer with Barley				
	500 lbs. feeder steer	4,120 lbs. of barley	Total	1,050 lbs. Slaughter Steer	550 lbs. of Beef
TO TORONTO					
From: Calgary	\$ 20.50	\$ 42.70	\$ 63.20	\$ 43.00	\$ 32.10
Moose Jaw	17.50	40.30	57.80	36.80	26.40
Winnipeg	13.80	37.80	51.60	29.00	20.50
TO MONTREAL					
From: Calgary	21.10	43.50	64.60	44.20	32.10
Moose Jaw	18.10	41.00	59.10	38.00	26.40
Winnipeg	14.40	38.50	52.90	30.20	20.50
Notes: 1) Slaughter steer transport charges calculated to nearest 10c from CFA Tariff 116-I, charges per railway installed double deck cars, assumed to load at 60,000 lbs. Tariff effective October 1, 1976.					
2) Beef transport charges calculated to nearest 10c from CFA Tariff 103-U, 50,000 lb. carload rate for meats, fresh or frozen, effective September 1, 1976. The rates in this tariff are the same to Toronto and Montreal.					
3) Barley transport charges calculated as Crow's Nest Rates to Thunder Bay and Canadian Livestock Feed Board charges to Woodstock, Ontario, in Toronto comparison and, less freight assistance to St. Felix, Quebec, in Montreal comparison					

The rail freight charges incurred in shipping a slaughter steer from Western Canadian points to Toronto and Montreal are substantially in excess of the charges for shipping an equivalent amount of beef. In respect of Toronto, the extra charges involved in shipping the slaughter steer ranged from \$8.50 on a Winnipeg origin to \$10.90 on a Calgary origin. The extra charges are somewhat greater when the destination is Montreal.

These savings on shipping meat rather than a live animal would, of course, be partly lost if some of the animal by-products have to be sent to eastern markets. These by-products consist of hides, fancy meats, meal and dry blood, and edible and inedible tallow. By-products amount to some 185 pounds per animal slaughtered but it is unlikely that all of these would be shipped to Eastern Canada. Even if they were all shipped to Eastern Canada, the cost of shipping the by-products would not be sufficient to offset the savings of shipping beef rather than slaughter steers.

In comparing freight charges on a slaughter steer with freight charges on a feeder steer and enough western grain to allow this steer to be fattened in the East, Woodstock is chosen for the location of the Ontario feedlot to serve the Toronto market and St. Felix is taken as the Quebec location to serve Montreal. The examination does not include either the costs of shipping animals from rural points to local stockyards or packing plants in Western Canada, or the transport costs incurred from the conversion of animals in Eastern Canadian feedlots into beef available in the markets of Toronto and Montreal.

It is clear from Table IX-6 that it is considerably cheaper to ship a slaughter steer from Western to Eastern Canada rather than a feeder steer plus the grain required to fatten it for slaughter. This is not surprising; very little western grain is used to produce beef cattle in Eastern Canada, where cattle fattening is normally based on corn. The present structure of freight charges includes the statutory rates on barley to Thunder Bay; although feed freight assistance has now been abolished to Woodstock, there is still an allowance of \$2 per ton to St. Felix, Quebec. However, this structure of charges does not favour the shipment of feeder animals together with their grain from Western Canada to Eastern Canada. Of the three possibilities considered, freight charges are lowest on meat and by-products; next lowest on slaughter steers; and highest on feeder steers if shipped together with the grain required for fattening.

Table IX-7 makes similar comparisons in respect of freight charges for moving 160 pounds of dressed pork from Western Canada to Toronto, Montreal and Saint John, as against moving the barley required to produce an equivalent amount of meat. It takes much less grain to produce pork than to produce beef and a conversion rate of four pounds of feed for one pound of pork has been used.*

In respect of Saint John, it is cheaper to ship the equivalent amount of barley than the pork from Western Canadian points. Considering

* This is lower than the 5:1 feed to meat conversion rate used in the CTC analysis, because the Commission found 3.7:1 or less is more consistent with actual industry practices.

TABLE IX-7					
Transportation Charges for Barley and Pork from Western Points to Toronto, Montreal and Saint John, 1976					
Origin	Toronto 600 lbs. Barley	Montreal 600 lbs. Barley	Toronto/ Montreal 160 lbs. Pork	Saint John 600 lbs. Barley	160 lbs. Pork
	-----	-----	dollars -----	-----	-----
Calgary	6.22	6.33	9.33	5.19	10.74
Moose Jaw	5.86	5.97	7.68	4.83	9.26
Winnipeg	5.50	5.61	5.97	4.47	7.74
Source: See Table IX-6					

Toronto and Montreal as destinations, it is cheaper to ship barley rather than pork from all three origins. There is a saving in transport charges producing hogs in Eastern Canada using western feed grains, as against transporting pork from the West. This results from the low statutory rates on feed grains to Thunder Bay and feed freight assistance, where it is still applicable, on the movement from Thunder Bay to eastern points.

The Commission recommends that freight rates on livestock and meat be set at levels which do not discriminate against the natural locational advantage of prairie livestock producers and processors.

The Malting Industry

Western Canada has distinct natural advantages as the location for malting plants. These plants require large quantities of barley

to be economically viable. Following processing, the malt has approximately three-quarters the weight of the barley input. The international price for malt is generally such that malting companies can pay more for malting barley than is paid for feed barley. It is therefore in Canada's interests that the malting industry thrive. It generates employment, uses renewable resources, permits increased farmer incomes.

Currently this industry in Western Canada is plagued with institutional constraints which mitigate against development in the natural area.

Malting plants have not generally been licensed as primary elevators. They are therefore unable to take delivery from the producer but purchase from country elevators. An additional handle is therefore entailed which at current tariffs amounts to some 12 cents per bushel, a part of which could be saved and accrue to the producer if different purchase arrangements with grain companies were developed. The Commission has been told that malt plants in the prairies face the threat of not being able to obtain malting barley from the primary elevator system if they purchase directly from the producers. This is despite the fact that such grain held in primary elevators is the property of the Canadian Wheat Board and not the elevator company. Also, because the plants are not generally licensed as primary elevators, most of the barley is delivered by rail, and a further 18 cents per hundredweight "stop-off" charge is levied.

Plants in other locations, next to export ports or in Eastern Canada, adjacent to such users as breweries, enjoy advantages in that they do not pay this stop-off charge.

The Commission recommends:

- 1) That the malting industry be permitted to enjoy the natural geographic advantage of locating in Prairie Canada.
- 2) That the railway stop-off charge for storage and processing of grains be eliminated.
- 3) That malting plants located on the prairies be licensed as process elevators and be free to take delivery of malting barley direct from producers as well as from primary elevators.
- 4) That freight rates on malting barley continue on the statutory basis, and apply to both malting barley and barley malt.

CHAPTER 10

GRAIN TRANSPORTATION COSTS

RAILWAY REHABILITATION, RATIONALIZATION AND THE COST OF MOVING GRAIN

This chapter presents the Commission findings with regard to the magnitude of funds required to rehabilitate and upgrade the rail system in Western Canada. Combining this information with data which is available regarding rail maintenance and the cost of train operation provides some insight into the future cost of grain movement by rail and illustrates the savings resulting from rationalization of the network.

The Commission acknowledges that the negative impact of rationalization will weigh more heavily on certain individuals than it will on others and that the presentation of average savings calculated on the basis of the complete rail network may seem abstract when viewed through the eyes of those who bear the greatest burden, due to line abandonment. Other chapters of this report have outlined the Commission observations with regard to the effects of rail line abandonment on all parties. Each subdivision recommendation was based on consideration of every aspect of these effects and the drawbacks to removal of service in an area were fully recognized.

The Commission was also aware of the need to view the economics of rationalization in the total sense with the inclusion of such offsetting factors as roads and trucking costs which are discussed elsewhere in this report.

TRACK IMPROVEMENTS

Present System

The prairie rail network is composed of lines representing a wide variety of conditions ranging from main line sections of track capable of high traffic volumes at maximum speeds and loads to certain impassable sections of branch line which might be classed as abandoned from the standpoint of maintenance for traffic movement. Most of the rail branch lines and secondary routes, which have been retained over the years, serve in the collection and movement of grain and could be categorized somewhere between these extremes with respect to present condition. Basic load carrying capacity of these lines varies with the weight of steel in place as follows:

TABLE X-1 WEIGHT OF STEEL AND LOAD CAPACITY		
Weight of track steel in lbs. per yard of length (single rail)	Normal designated load capacity (Maximum loaded car weight in lbs.)	Grain carrying capacity (Net weight in tons)
56 to 80	177,000	60 Ton Box Car
80 to 100	220,000	90 Ton Aluminum Hopper Car
100 --	263,000	100 Ton Steel Hopper Car

The following table outlines the capacity of lines of the rail system in Western Canada:

TABLE X-2
RAIL LINE Capacity

Capacity in lbs.	CN LINES		CP LINES		NAR LINES		TOTALS
	Cat.A	Cat.B	Cat.A	Cat.B	Cat.A	Cat.B	
..... Miles of Rail Line - Each Company							
177,000	352.4	3,018.5	--	132.6	172.4	58.1	3,734.0
192,000	--	--	--	--	113.1	26.5	139.6
220,000	1,265.6	854.5	2,166.2	1,741.5	--	--	6,027.8
263,000	3,891.5	--	3,691.0*	470.1	550.5	--	<u>8,603.1</u>
							18,504.5
* Includes 107.3 miles 251,000 lb. capacity							

Specification of rail line load carrying capacity is also dependent on certain factors in addition to weight of steel installed. These other factors relate to roadbed condition or essentially foundation for the steel such as condition of cross ties, tie support or stability and the load capacity of structures such as bridges and trestles. Tie support is, in turn, a function of subgrade construction, drainage, ballast maintenance*, vegetation control and condition of the steel itself.

A large portion of the network is characterized by branch lines on which capital expenditures and maintenance work have been severely curtailed. This deferral of expenditure has resulted in a deterioration of railbed and structures. Operation of trains over many branch lines and sections of branch lines must consequently take place with reduced

* Ballast maintenance involves replacement of gravel, crushed rock or cinders and the leveling and tamping of this porous material around the ties to provide good top grade drainage, adequate tie support and track alignment.

loads and/or speeds. In some cases, especially where drainage is a limiting factor, train operations are restricted to certain periods of the year when roadbeds are dry or have been stabilized by freezing.

Future operation of many branch lines will be dependent upon an immediate increase in the level of annual maintenance. Some lines have reached the point where continuation of train service beyond a period of two to five more years could only be considered practical by the injection of capital in the form of a major program to replace defective ties, reballast and repair subgrade and structures.

Cost Estimates Submitted and Determination of Improvement Funds Required

Railway companies have provided detailed descriptions of the physical condition of all subdivisions which make up the approximately 6,300 miles of Category "B" rail line. In addition, each company presented estimates of capital required to perform major repair programs (rehabilitation) or alternately to rebuild (upgrade) lines to provide track and roadbed capable of carrying large hopper cars and heavy locomotives. These estimates of capital required for major repair and rebuilding included the subdivisions in the western rail system which comprise the Category "A" lines or basic network as well as Category "B" lines.

a) Variability of Estimates presented to the Commission:

Estimates of capital required to rehabilitate lines as presented by the railway companies to the Commission varied from less than ten thousand dollars to over 100 thousand dollars per mile.

This Commission must be cognizant of the complete prairie rail network; however, a major emphasis of the inquiry process and

analysis has centred around the rail system as it relates to grain transportation. The Commission on the Costs of Transporting Grain by Rail identified specific lines as "grain dependent".* The lines so designated account for 5,250 miles out of the 6,300 miles of Category "B" rail line in addition to 1,825 miles of the basic network and approximately 50 miles of Category "C" as follows:

TABLE X-3				
GRAIN DEPENDENT LINES				
Railway Company	Category "A"	Category "B"	Category "C"	Total
	..... Miles Approximately			
CN	125	3,230 (3,870)	--	3,355
CP	1,700	2,020 (2,340)*	50	3,770
TOTAL	1,825	5,250 (6,300)**	50	7,125
* Numbers in brackets are total mileages of rail including non-grain dependent lines.				
** Includes 90 miles of NAR				

The following table illustrates the average expenditure required per mile of track in the grain dependent and non-grain dependent categories as presented by the railway companies.

* See Commission on the Costs of Transporting Grain by Rail Report, Volume I, pp. 106.

TABLE X-4 RAILWAY COMPANY REHABILITATION ESTIMATES				
Railway Company	Grain Dependent Lines		Non-Grain Dependent Lines	
	Cat. A	Cat. B	Cat. A	Cat. B
	..... \$/Mile			
CN	71,000	75,000	61,000	63,000
CP	38,000	23,000	36,000	20,000

Rehabilitation and upgrading costs for the grain dependent lines was a topic of much discussion in the costing hearings, and figures presented to the Commission on the Costs of Transporting Grain by Rail were in some cases at variance with information presented to this Commission. Examination and analysis of various estimates presented by railway companies for the rehabilitation or upgrading of the grain dependent lines thus provides some background for more accurate determination of funds which will be required for improvements in any future network configuration selected.

b) Relationship of Rehabilitation Estimates to Actual Railway Line Condition and Comparison with Estimates presented to the Commission on the Costs of Transporting Grain by Rail

In submissions to the Commission on the Costs of Transporting Grain by Rail, Canadian National presented various estimates for the rehabilitation of grain dependent rail lines which finally settled at an average figure of about \$48,500 per mile. This figure was approximately \$30 thousand per mile lower than estimates

previously presented to this Commission for the same category of lines due to a change in year of costing and reduction in specification of ballast, tie plates and bridge repairs.

The CP Rail rehabilitation estimates presented to the Commission on the Cost of Transporting Grain by Rail were generally consistent with CP estimates presented to this Commission and averaged about \$20 thousand per mile less than the final Canadian National figure in the case of the grain dependent lines.

During 1976, the Railway Transport Committee of the Canadian Transport Commission completed a program which had been initiated in 1975 to provide a physical inventory of all railway branch line assets for use in administering branch line subsidy claims. The results of this survey were made available to this Commission in the form of Branch Line Inspection Sheets. The following table summarizes the results of a compilation of data which was extracted from the inspection sheets.

TABLE X-5 BRANCH LINE INSPECTION SHEETS SUMMARY				
		Approximate Mileage	% Ties Resuable	% Ties Plated
All Category "B" Lines	CN	3,870	52	47
	CP	2,340	32	94
All Category "A" Grain Dependent Lines	CN	125	61	46
	CP	1,700	34	98

Review of the above compilation would suggest that the average physical condition of Canadian National rail lines is better than that of CP Rail using percentage of reusable ties as an indicator. There was considerable discussion to the contrary recorded in the Commission on the Costs of Transporting Grain by Rail hearings.*

It is recognized that the branch lines of the CP Rail system are more fully tie plated and that they are equipped with heavier weight of steel than the Canadian National branch lines in general; however, this does not account for the great difference in the cost estimates for rehabilitating lines to normal capacity or restoring them to similar physical condition.

The rehabilitation estimates presented by Canadian National were based on the establishment of a predetermined standard per mile with allowances for specific renewal or rebuilding as required for structures on a particular line. Materials required for each subdivision were estimated by using the Canadian Transport Commission Branch Line Inventory Program Inspection Sheets as a reference. For example, the quantity of new ties required in rehabilitation (approximately one-third of total) was calculated by assuming new

* In the Commission on the Costs of Transporting Grain by Rail hearings, transcript page 2716, CP stated that their rehabilitation estimates represented approximately ten years of maintenance deferral - Canadian National suggested that maintenance deferral for their lines likely started back in the early 1950's and that CP's lines received major injections of new ties and ballast at the time of relaying heavier steel in years following the second world war. -- Also note, on page 2717 of the same Commission hearing transcript, a quote by Mr. Wooden of Canadian National:

"I am just saying that we have, for example, a higher percentage of the ties in CN line not useable or salvageable than in the CP lines."

tie replacements would be equal to the difference between total ties in the line and a figure equal to reusable ties, according to the inventory, plus 15 percent.

Estimates presented by CP Rail were based to a greater extent on consideration of the standard required and justified in order to maintain service as related to volume of traffic expected on a particular line.

c) Selection of Average Cost per Mile Figures and Application to a Defined Network:

Rehabilitation and upgrading costs have been assembled from the following sources in addition to submissions of the railway companies:

- Deleuw Cather Consulting Engineers - from private discussions and content of Micro-rationalization Studies commissioned by the Ministry of Transport to assist the Commission;
- Various studies and articles concerning branch lines in Iowa;
- Loram International testimony before the Commission on Cost of Transporting Grain by Rail;
- Canadian Transport Commission estimates prepared by Railway Transport Committee for reference in Canadian Transport Commission abandonment hearings.

These costs have been compared with figures presented by the railway companies and railway specifications such as FRA track standards (United States) have been reviewed. Table X-6 displays the costs selected as averages for application to a system configuration based on analysis of this data. This Commission views the

TABLE X-6			
REHABILITATION OR UPGRADING EXPENDITURE*			
Place of Line in a Future Network	----- Present line Description -----		
	Light Steel (less than 80#/yd.)	Steel 80 - 85#	Steel 100#
	..... \$/Mile		
To be phased out over the next five years	Nil	Nil	Nil
To remain in system beyond five years and to be reviewed	15,000 (retain light steel)	15,000 (retain 80-85# steel)	15,000
To remain in system indefinitely where traffic volume is low	100,000** (replace light steel with 85# steel minimum)	25,000 (retain 80-85# steel)	25,000
To remain in system indefinitely with higher traffic volumes or where line is a link in the network***	140,000 (replace light steel with 100# steel)	140,000 (replace 80-85# steel with 100# steel)	25,000
<p>* These costs represent 1974 conditions.</p> <p>** Where rail is replaced, the salvage value has been deducted from the upgrading cost shown here - above figures then represent expenditures not total line investment</p> <p>*** In the case of a new linkage, the investment would be \$220 thousand per mile.</p>			

approach of relating expenditure, albeit somewhat subjectively, to traffic volume and future of the line as most practical. These factors resulted in a decision to apply similar average estimates to similar categories of branch line rehabilitation without differentiation between Canadian National and CP Rail.

"Upgrading" rail line implies a reconstruction of the physical plant starting at the subgrade to provide unrestricted operation of locomotives and equipment over the lines or sections of the lines to be retained.

Rehabilitation implies the restoration of the rail line to its original condition or design specification. This would be misleading in the sense that strict adherence to the original basic track criteria would not be compatible with current engineering practices, available materials and methods used today. For example, many temporary pile trestle bridges were installed on the principle that they would be replaced with fills and culverts after 12 to 15 years of service. Many of these temporary bridges still exist today and represent restrictions affecting speed and equipment at many locations. In addition, permanent bridges were constructed for a lighter class of locomotive power, again restricting heavier equipment now in general use by the railways. Rehabilitation could be defined as the restoration of the physical plant to a safe operating condition for a speed of 30 miles per hour.

Rehabilitation as applied to the deteriorated branch lines does contain certain basic requirements common to all branch lines:

TABLE X-7
CN BRANCH LINE REHABILITATION ESTIMATE
3,535 MILES SOLELY RELATED GRAIN LINES
1974 PRICES*

Summary Revised Estimates

Description	Quantity	Unit	Unit Cost	Total Cost \$	Equivalent to Quantity/Mile	\$/Mile
(000's)						
Bankwidening, Drainage & Culvert Extensons	3,535	Track Mile	4010	14,175		4,000
Ballast - In Place	<u>370700</u> 8600000	Cubic Yard	<u>10.92</u> 6.82	<u>4,048</u> 58,652	2,500 yd.	18,000
Track Ties	3571302	Each	13.18	47,070	1,000	13,000
Rail Anchors	5757486	Each	1.23	7,081	1,600	2,000
Tie Plates	2741860	Each	2.97	8,143	775	2,300
Bridge Rehabilitation		Sum		8,772		2,500 (Average)
Other-Fencing, Road Crossings, Vegetation Control, Miscellaneous		Sum		7,902		2,200 (Average)
Contingencies 10% On	<u>155,853,000</u>			15,584		4,400
TOTAL COST OF PROJECT	171,427,000			171,400		48,500

NOTE: Rehabilitation - Work required now to make the line suitable for continuing operation at normal speeds and present weight carrying capacity, continuing to use the rail now in place.

* CN estimate from Rebuttal Submission of CNR to the Commission on the Costs of Transporting Grain by Rail, 21 June 1976, Regina, Saskatchewan.

- 1) Drainage (spreader ditcher operation);
- 2) Culvert repairs and replacement;
- 3) Bridging repairs;
- 4) Bank widening and restoration;
- 5) Ballast renewals and surfacing;
- 6) Tie replacements to an acceptable level;
- 7) Rails and fastenings (no major program).

Table X-7 further illustrates the types of materials and unit costs involved in rehabilitation. This table contains the final numbers which Canadian National presented for grain dependent line rehabilitation costs to the Commission on Costs of Transporting Grain by Rail.

d) Estimation of Total Capital Required

Application of the appropriate figures from Table X-6 requires a knowledge of and some judgement with regard to level of service and likely future period of operation. It was determined that the estimates presented in the final submission by CP Rail for the upgrading of lines to 263 thousand pound capacity were lower than the figures which were presented at some local hearings as the costs required to rehabilitate lines to 220 thousand pound capacity for long term use. This indicated that CP Rail considered a lower standard specification of roadbed for certain lines to run at 263 thousand pounds than the original concept of a long term 220 thousand pound capacity line. It was also observed that expenditures

recommended by CP Rail in a network for the future as contained in the final submission to the Commission did not differ significantly from the rehabilitation estimates; variations were accounted for mainly by the need to upgrade certain sections of track which presently contain rail lighter than 80 pounds per yard. This approach to specification of a system for the future is consistent with CP Rail current practice of operating heavy equipment (100 ton steel hopper cars) over some lines on which steel in place is actually below 100 pounds per yard.

In determination of total capital required, the Commission adopted the CP Rail approach to system specification by assuming that steel of less than 100 pounds per yard would serve adequately in many lines of a future network. It was further assumed that in some cases even the lightest specification of steel would remain in place and that for some period in the future the use of light cars over a portion of the network will find economic justification when compared with the alternative of exclusive use of heavy equipment and the attendant capital required for upgrading.

Throughout the inquiry there have been some suggestions that the complete prairie rail system should be retained and further that the complete system should be retained and upgraded to the highest standard; that is, that it should be capable of handling the 100 ton steel hopper cars at every existing point. This Commission, in coming forward with a scheme for rationalization which includes the abandonment of 2,165 miles and the retention

of other lines without a firm recommendation for upgrading, has obviously rejected the notion that the system should be "complete" regardless of cost. The following table illustrates the estimates of capital which would be required for alternatives which represent certain of these more radical solutions to provision of a network for the future as compared to the capital required to provide an "adequate network" for the future according to this Commission's recommendations.

TABLE X-8 ESTIMATES OF CAPITAL REQUIRED (1974 Dollars in Millions)					
	Upgrading the Complete Existing Network		Combination of Upgrading & Rehabilitating the Complete Existing Network		To Provide The Adequate Network-Configuration Recommended by the Commission
	According to Rly. Companies	According to Commission	According to Rly. Companies	According to Commission	According to the Commission Estimate
CN	1,204.7	758.4	360.4	524.1	297.5
CP	532.7	615.8	176.7	160.9	133.0
NAR	8.3	14.5	2.1	14.5	14.5
TOTAL	1,745.7	1,388.7	539.2	699.5	445.0

The estimate of \$445.0 million required to provide the adequate network as outlined in this Commission's recommendations is detailed in the following table.

TABLE X-9 COMMISSION ESTIMATE OF REHABILITATION AND UPGRADING FUNDS REQUIRED TO PROVIDE AN ADEQUATE NETWORK FOR THE FUTURE (1974 Dollars in Millions)					
	Grain Dependent Lines		Non-Grain Dependent Lines		Total
	Cat.A	Cat.B	Cat.A	Cat.B	
CN	11.6	117.3 (21.4)	146.6	22.0 (2.6)	297.5 (24.0)
CP	52.3	25.8 (14.2)	48.7	6.2 (1.5)	133.0 (15.7)
NAR	--	--	3.7	10.8	14.5
TOTAL	63.9	143.1 (35.6)	199.0	39.0 (4.1)	445.0 (39.7)
NOTE: The numbers in brackets are estimates included for rehabilitation expenditures estimated for lines which would be transferred to the Prairie Rail Authority according to the Commission's recommendations.					

The relatively higher total system cost for Canadian National of \$297.5 million versus CP Rail \$133 million in a suggested network is largely a result of the high proportion of light steel rail which presently comprises the Canadian National branch lines. Upgrading and new construction accounted for \$260.3 million for Canadian National and only \$21 million of the above commission estimate for CP Rail.

The above estimates were based on detailed assumptions regarding specifications used to determine the contribution of

each subdivision to the total figure. Only the total cost figures are submitted as a best estimate of future requirements. The total cost is likely more significant and meaningful as a reference than is the detailed specification which has been assigned to any individual line for purposes of deriving this total, and this Commission is not promoting and does not support the adoption of a preset plan for the future based on such assignment. The establishment of required specifications and the determination of priorities regarding rehabilitation or upgrading programs will depend on a number of factors related to the changes which take place over the future years. Volume of traffic, including possible non-grain development, and sizing of equipment are major factors which will enter into decisions as time unfolds and as branch lines come up for major repair or rebuilding.

THE EFFECTS OF SYSTEM RATIONALIZATION ON THE COST OF MOVING GRAIN

The preceeding section of this chapter has outlined the Commission findings with regard to capital required in order to rehabilitate and upgrade the rail network in Western Canada. This analysis has demonstrated the potential capital savings which might be realized through the abandonment of certain lines and through retention of other lines on the basis of "discretionary investment." Retention of the complete system "as is" with some judgement applied in the level of service required could reduce new capital injection required

by about 50 percent from nearly \$1,400 million to approximately \$700 million. Rationalization as recommended by the Commission would further reduce capital requirements by about \$250 million to the final estimated total of \$445 million. These estimates include funds required within the complete prairie rail network. Rail lines designated as grain dependent account for approximately \$200 million of the total, however, the major portion of the above savings is a result of reductions in the allocation to those rail subdivisions which fall within this category. The following discussion provides some perspective on the effects of line abandonments on both capital and operational costs as related to grain movement.

The Commission on Costs of Transporting Grain By Rail report provides a breakdown of costs for 7,126.9 miles of grain dependent lines consisting of 3,771.8 miles of CP Rail and 3,355.14 miles of Canadian National. This breakdown addresses roadway costs whereas train operational costs were totalled for the system as a whole as assigned to grain movement.

Grain dependent roadway costs as compiled by the Commission on Costs of Transporting Grain by Rail were subclassed as volume related and line related. The line related costs are relevant for purposes of assessing potential savings due to rationalization -- these costs are essentially avoidable in that abandonment of a line would eliminate this category of accounts. Line related costs of \$31.7 million for CP Rail and \$20.9 million for Canadian National are equivalent to an average annual cost of \$7,380 per mile of grain dependent rail line.

The \$7,380 per mile annual cost figure consists of roadway maintenance, taxes, depreciation and capital funds costs but it does not include the cost of additional capital which would be required in order to rehabilitate or upgrade lines. The Commission on the Cost of Transporting Grain by Rail figures do, however, include sufficient costs to maintain lines on a continuing or ongoing basis and in this way the totals reflect higher levels of expenditures than in current practice.

Calculation of potential savings resulting from network reduction might then be considered in terms of three categories as follows:

- 1) Roadway maintenance - \$7,380 per mile. This includes annual maintenance, taxes, depreciation and cost of funds presently invested.
- 2) Cost of new capital. This is the annual cost of funds which would be required to rehabilitate or upgrade the lines to a standard adequate for the future.
- 3) Train operation. This is the additional cost of train runs on lines. Only part of the total train operating costs are available for savings since there would be a transfer of costs to neighboring lines in the event of abandonment.

In order to demonstrate the effects of abandonment and to provide some guidance for future consideration of line viability, the Commission has assessed costs associated with three network configurations.

The cost of capital was a subject of major concern in the proceedings of the Commission on the Costs of Transporting Grain by Rail. This is a complex subject and the choice of an appropriate rate of return is dependent on a wide array of assumptions related to capital structure and capital markets. This presentation of potential savings

will include only the estimates of capital funds required. The second volume of the Commission on the Costs of Transporting Grain by Rail report will present further detail with regard to annual cost of capital required for various configurations of the rail network.

Train operational cost savings have been approximated by considering the reduction in service units as detailed in the Canadian National final submission to this Commission as estimated for abandonment of 2,532 miles of track. This reduction in service units as estimated by Canadian National was expressed as a percentage of total output units for Canadian National as detailed in Appendix E of the Commission on the Costs of Transporting Grain by Rail report. The reduction in train operational costs was then computed by applying the above percentage reduction in output units to the appropriate cost item in Appendix M of the same report. This resulted in a total of \$7.9 million for an average reduction in train operational expenses equivalent to \$3,120 per mile of abandoned track.

Configurations which have been selected for demonstration of potential savings which attend railway rationalization are outlined in the following table. The purpose of this table is to present only the order of magnitude of savings expected in various cost categories. The application of the Canadian National average cost per mile reduction in train operational savings and use of the aggregate average roadway maintenance figure as discussed above is considered appropriate for purposes of this presentation. More specific data will be used in order to provide more precise results in all these cost categories for various rail configurations to be included in the second volume of the Commission on the Costs of Transporting Grain by Rail report.

TABLE X-10
REDUCTION IN COSTS & CAPITAL REQUIREMENTS
RESULTING FROM RATIONALIZATION

Description of Network Configurations	Potential Annual Savings			Capital Funds Savings
	Mileage Reduction	Roadway Maintenance	Train Operation	
..... \$ Millions				
1. The present configuration Refer to Map #1	0	0	0	0
2. The configuration as of 1981. (This is following all of the abandonments recommended by the Commission as detailed in Chapter XI) Refer to Map #2	2,165.5	16.0	6.8	254.5
3. The network as recommended by the railway companies in final submissions to the Commission	3,699.2	27.3	11.5	246.9*

* Even with the greater mileage reduction in the railway configuration the capital requirements are more than the Commission's recommended system due to lower levels of expenditure required for 2,343 miles of Prairie Rail Authority Lines.

* Even with the greater mileage reduction in the railway configuration the capital requirements are more than the Commission's recommended system due to lower levels of expenditure required for 2,343 miles of Prairie Rail Authority Lines.

COMPARISON OF OFF-LINE ELEVATOR SERVICES TO RAIL SERVICE

The concept of off-line elevator operation was discussed in Chapter 5. The Commission recommendation that mechanisms be established to facilitate this type of operation is based on recognition of the potential for substantial savings in costs associated with the movement of grain by truck versus rail in some areas.

Abandonment of the Inwood subdivision would leave the communities of Fisher Branch and Broad Valley without rail service and the Commission has cited this area as a case where off-line elevator operation would be feasible. The following presentation of costs is a result of analysis of different options in forwarding grain from receiving elevators at Fisher Branch and Broad Valley. This analysis involves a number of assumptions with regard to the cost components in each option, however, such analysis demonstrates the order of magnitude of savings to be realized by off-line elevator operation versus retention of rail service expressed in terms of 1974 costs.

Rail Service

Various alternatives have been reviewed in considering least cost means of retaining rail service to Fisher Branch. Long term operation could be most economically achieved by the construction of a new 19 mile rail link from Arborg to Poplarfield. This results in a total annual rail and train cost of \$500 thousand to \$900 thousand or 50 cents to 90 cents per bushel of grain forwarded.

Off-Line Operation

This mode of operation would involve commercial trucking of grain from Fisher Branch and Broad Valley to be transloaded on-line at Arborg. Trucks would travel over a total of three miles of access roads near the two communities in addition to about 13 miles of highway #16 and 18 miles of highway #68.

A maximum of about eight truck loads per day would move all grain delivered during peak periods. It is estimated that this additional traffic would have a minimal effect on the roads involved, resulting only in a slight decrease in time interval between regular resurfacing operations at an annual cost of \$350 per mile of road affected for a total of about \$11 thousand or one cent per bushel.

It was determined by the Commission that the marginal cost of handling additional grain at Arborg would be about four cents per bushel. It is likely that an older elevator at Arborg might be dedicated exclusively to the transloading of grain and an analysis of operating and capital costs for this type of facility confirms the four cents per bushel figure for this second handling.

A commercial trucking cost for elevator to elevator haul of seven cents per bushel when combined with the additional road and handling costs results in a total cost of about 12 cents per bushel.

Potential Off-Line Elevators

In Chapter 5 of this report the Commission outlined characteristics of delivery points which should be considered for off-line operation.

The above example shows that this mode of operation would result in substantial savings in the forwarding of grain. The Commission views this result as demonstrative of sound economic potential inherent in the off-line elevator concept further reinforcing the recommendation that a number of points be seriously considered for this type of operation.

STATUTORY RATES

Regardless of what rate may be set for the transport of grain to export position that rate must be statutory, not variable. Anything else would be a violation of promises made to the producers of Western Canada. If the Government considers that the railways should have the amount suggested by the Commission on the Costs of Transporting Grain by Rail to transport grain, that amount, according to the findings of that Commission, will be in excess of the Crows Nest Rate. How the difference between the new rate and the Crows Nest Rate will be apportioned between the Government and the producer is, of course, a matter for Government decision. This Commission feels that the Government must continue to subsidize the transportation of export grain and that the full cost, as deemed by the Commission on the Costs of Transporting Grain by Rail, must not be imposed on the producer. The contribution Western grain makes to Canada's balance of payments position demands that a substantial part of any increase be borne by the federal Government in the National interest.

Support for the retention of the Crow Nest (Statutory) Rate was voiced by the Honourable Jack Davis, speaking for the Province of British Columbia, at our Vancouver hearing:

"While we believe that the export of grain should pay its own way on the railways, we are not, at the same time, saying that the prairie wheat farmer should pay the difference. We are saying instead that the Federal Government should bridge the gap. It should pay the farmer the difference between the present level of rates and a realistic level of rates, the latter being equal to the true cost of moving grain to the Coast."

The Commission recommends that the difference between the Crows Nest Rate and the rate determined through costs found by the Commission on the Costs of Transporting Grain by Rail should be paid directly to the railways, and not to individual farmers. The very idea of sending out cheques to 160 thousand farmers is appalling.

CHAPTER II

AN EVALUATION FRAMEWORK

AN EVALUATION FRAMEWORK

In conducting a comprehensive evaluation of the transportation requirements of each area of the prairies, the Commission gave full consideration to the implications of any adjustments to the grain handling and transportation systems as they related to producers, communities, the primary elevator system and the rail network operations.

At the outset of its analysis the Commission divided the grain growing area of Western Canada into 17 regions, a breakdown devised to accommodate an appropriate evaluation process. Boundaries for the regional analysis were established following consideration of such factors as natural geographic boundaries, production patterns, the railway network, shipping blocks and the size of each area. Within these regions the Commission was also able to have area studies carried out to examine the impact of changes in the configuration of the rail and elevator system within an area. These alternative configurations involved construction of links between various parts of the existing rail system, the effect of the closure of lines, or parts of lines, on other parts of the system, and the road and highway requirements of these areas.

Rail lines considered by the Commission were analysed in a variety of ways. The information presented at local, regional and global hearings was an important input to this process. The concerns, views and aspirations of individuals, organizations

and communities, as expressed through the presentation of 1,296 briefs at 77 local, and 14 regional hearings, played a major role. The information provided through hearings and the statistical information available from a multitude of sources, was naturally voluminous. The Commission established a set of criteria for assessment of branch lines which:

- i) Broadly reflected some of the dimensions of importance of the branch line to the grain handling and transportation activities in the area.
- ii) The importance of communities in the area. Population is not the only indicator of the importance of a community. Account has been taken of services, both economic and social, provided by communities. The presence of schools, hospitals and recreation facilities are indicators of community significance.

The establishment of such criteria provided a valid basis for identifying those obvious candidates for retention or abandonment.

The criteria for assessment of Branch lines included such data as the number of permit book holders served by the line, the volume of grain receipts, the condition of, and future plans for primary elevators on the line, the costs associated with rehabilitating or upgrading the line, the importance of non-grain traffic, the importance of communities on the line and additional trucking distances to alternate lines. This latter criterion

also accounts for such factors as, time, added energy consumption and impact on rural roads.

It was not desirable to reduce this total assessment to a purely mechanical selection process. Common sense and judgement had to remain of paramount importance in arriving at a final decision and recommendation for each line.

In recommending retention of lines the Commission placed these lines in one of two categories:

- 1) To be retained and placed in the basic network guaranteed to January 1st, 2000. Included in this category were:
 - i) Lines which were essential to providing a direct through route for transportation of grain and other commodities.
 - ii) Heavy volume lines on which traffic is expected to increase in the future.
 - iii) Lines which, if abandoned, would create extremely severe hardships for the users of those lines, through extremely long distance truck hauls, etc.
- 2) To be retained and placed under the jurisdiction of the Prairie Rail Authority. Included in this category were:
 - i) Lines on which traffic, at this time, is

sufficiently heavy enough to warrant retention for a period exceeding five years.

ii) Lines which will increase in importance and volume of traffic due to the abandonment of adjacent lines.

iii) Lines where it is sufficiently unclear that elevator companies will retain service to January 1st, 2000.

In recommending abandonment of lines the Commission has recognized the need to allow sufficient time for adjustments to take place. Producers need time to adjust to new hauls, elevator companies require time to increase elevator capacities, or improve handling capabilities on adjacent lines and municipalities to make any required road improvements. The Commission has recommended that some lines can close June 30th, 1977. These are lines on which there are no elevators remaining, and which generate no other rail traffic.

In all cases of abandonment, as set out in the regional recommendations, the Commission recommends that the right of way in each case vest in the Crown in the Right of the Respective Province. Upon abandonment the railway retains the Chattel property, rails, ties and track material, but not culverts where a drainage pattern has been established.

REGION 1

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

+++++ Transfer from CNR to CP Rail



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REGION 1

Canadian National - Ridgeville Subdivision

- From Emerson to Ridgeville, Manitoba - 11.4 miles

This line was constructed by the Canadian Northern Railway between 1902 and 1906, and subsequently absorbed into the Canadian National Railway System.

The two N.M. Paterson and Sons elevators at Ridgeville are in useable condition. The company states that the low handle of 120 thousand bushels per year limits the economic life of this delivery point. They do not consider that Ridgeville will become a major delivery point.

The Manitoba Pool Elevator at Fredensthal is in good condition, and handles in excess of 200 thousand bushels per year. Handlings will increase when the Ridgeville elevators close and elevators at Fredensthal have the capacity to handle the additional volume.

Grain receipts on this line averaged 398 thousand bushels per year in the ten years ending 1974-75. Average receipts are 35 thousand bushels per mile of track.

The Commission recommends that;

- 1) the 4.5 miles of track between Fredensthal and Ridgeville be abandoned December 31, 1977, and;

- 2) the 6.9 miles of track between Emerson and Fredensthal be retained and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.1
Commission Recommendations For Category "B" Branch Lines
REGION 1

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30	Dec. 31	1978	1979	1980	1981
CN RIDGEVILLE	RIDGEVILLE	FREDENSTHAL	4.5				4.5				
CN RIDGEVILLE	FREDENSTHAL	EMERSON	6.9		6.9		—				
TOTAL REGION 1			11.4		6.9		4.5				

REGION 2

LEGEND

Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

To be added to the Basic Network
To be transferred to The Prairie Rail Authority
To be abandoned, 1977-1981

New construction

Transfer from CP Rail to CNR

Transfer from CNR to CP Rail

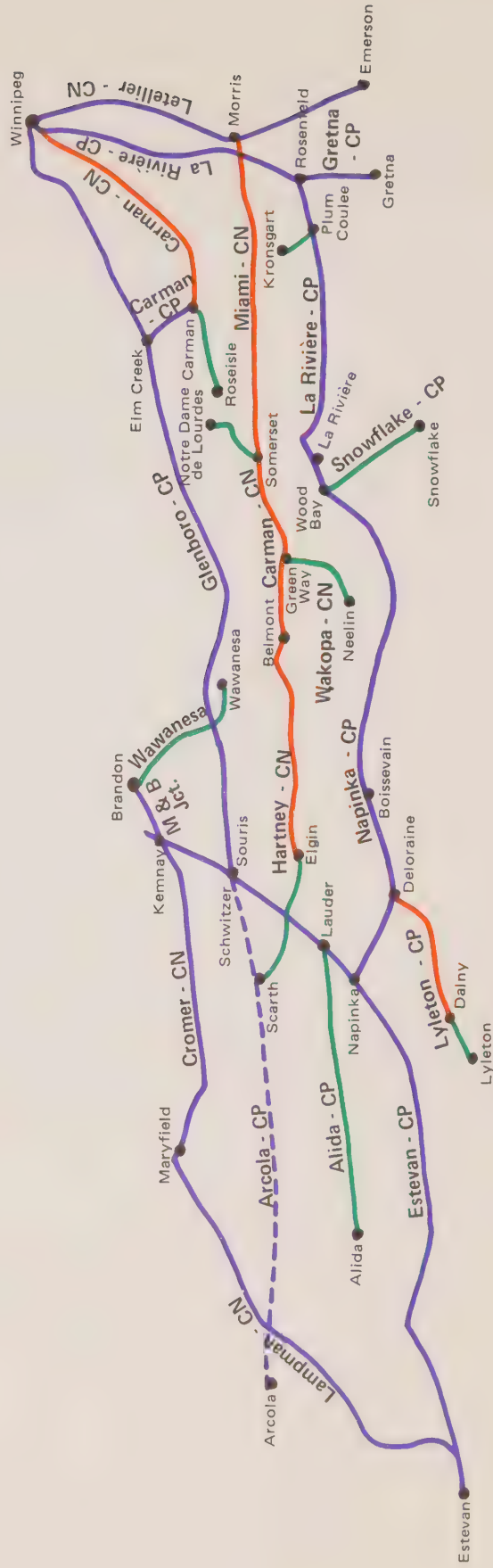


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REGION 2

CP Rail - Arcola Subdivision

- From Schwitzer, Manitoba to Arcola, Saskatchewan-96.0 miles

This line was constructed between 1892 and 1901. It is constructed with 100 pound steel and has a gross carrying capacity of 263 thousand pounds.

Grain receipts on this subdivision have averaged 3.7 million bushels per year, in the 10 years ending 1974-75. Averaged receipts equal 38 thousand bushels per mile of track.

This subdivision forms a part of a continuing secondary line through the southern prairies, providing a bridge between Southern Alberta, Southern Saskatchewan and the Lakehead.

The Commission recommends that the Arcola Subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

CP Rail - Alida Subdivision

- From Lauder, Manitoba to Alida, Saskatchewan - 54.5 miles

This line was built by the Canadian Pacific Railway between 1902 and 1912. The rail is primarily 85 pound steel, rolled in the period 1896 and 1911 and installed partly worn between 1948 and 1953.

Grain receipts on this line averaged 1.6 million bushels per year, in the 10 year period ending 1974-75. Average receipts equal 29 thousand bushels per mile of track.

Manitoba Pool Elevators have made extensive renovations to elevators on adjacent lines at Sinclair and Pierson, and are constructing a new elevator at Reston. Both United Grain Growers and the Saskatchewan Wheat Pool forecast a limited life for their delivery points on this line.

The bridge over the Souris River at Mile 4.6 was washed out in April 1976. CP Rail refused to replace it. There were a number of smaller structures washed out and a causeway between mileages 4 and 6 that is badly eroded. No traffic has moved over this line since March 1976.

The Commission recommends that the Alida Subdivision be abandoned as at June 30, 1977, and that CP Rail be ordered to empty the elevators on this line.

CP Rail - Lyleton Subdivision

- From Deloraine to Lyleton, Manitoba - 37.5 miles

This line was constructed by Canadian Pacific Railway between 1900 and 1903. It has 85 pound steel and a gross carrying capacity of 220 thousand pounds.

There are four delivery points on the line; Lyleton, Dalny, Waskada, and Goodlands. Grain receipts on the line averaged 1.7 million bushels per year, in the 10 year period ending 1974-75. Average receipts equal 44 thousand bushels per mile of track. The area served by the Lyleton Subdivision is bordered on the south by the United States boundary. Alternate delivery points

are restricted to those on the Napinka Subdivision to the north. If the total subdivision was abandoned many producers in the Waskada area would have hauling distances in excess of 20 miles.

Both Paterson and Manitoba Pool have elevators at Lyleton. The Paterson elevator is in very poor condition, and that company have stated that they do not plan to renovate or rebuild. The Lyleton Pool Elevator Association is an independent association. Manitoba Pool Elevators state they have no plans to renovate this elevator. They are in the process of upgrading their plant at Pierson to service a larger area and have recommended that portion of the line west of Waskada be retained until 1980.

In April 1976 the bridge over the Souris River at mile 25.4 of the Subdivision was rendered inoperable. CP Rail have refused to repair this bridge. No trains have been west of Dalny since early 1976.

The Commission recommends that:

- 1) the 15.3 miles of line between Dalny and Lyleton be abandoned at June 30, 1977; and
- 2) that the 22.2 miles of the Subdivision between Deloraine and Dalny be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 3) The Commission also recommends that CP Rail be ordered to empty the elevators at Lyleton.

Canadian National - Hartney Subdivision

- From Belmont to Scarth, Manitoba - 82.9 miles

The first few miles of this subdivision were built by the Northern Pacific and Manitoba Railroad in 1898, as part of the Morris to Brandon line. The remainder was built by Canadian Northern in 1905. The line formerly continued on to Virden. The Scarth to Virden portion of the line was abandoned in 1975. No traffic originates or terminates on the Hartney to Scarth portion of this subdivision. This part of the subdivision serves as a "bridge" to gain access to the traffic generating portion of the line east of Hartney. The line is constructed with 56 to 60 pound steel and has a gross carrying capacity of 177 thousand pounds.

Grain receipts on this line averaged 2.8 million bushels per year in the 10 year period ending 1974-75. This is equivalent to 34 thousand bushels per mile of track. Between Hartney and Belmont this subdivision serves the delivery points of Elgin, Fairfax, Minto, Margaret, Dunrea and Ninette. Annual receipts on this portion of the line averaged 2.6 million bushels in the 10 year period ending 1974-75; equal to 63 thousand bushels per mile of track. Hartney is currently served by both the CP Rail Estevan Subdivision and the Canadian National Hartney Subdivision.

The Canadian National Railway have stated that this subdivision could be served efficiently from the Carman Subdivision as

far west as Elgin.

The Commission recommends that:

- 1) the portion of this subdivision from
Elgin to Scarth be abandoned June 30, 1977,
and,
- 2) that portion between Belmont and Elgin be
retained and placed under the jurisdiction
of the Prairie Rail Authority.

CP Rail - Snowflake Subdivision

- From Wood Bay to Snowflake, Manitoba - 16.6 miles

This line was constructed by Canadian Pacific Railway from Wood Bay to Mowbray between 1899 and 1903, and extended to Windygates in 1908-09. A second extension ran west from Snowflake to Fallison. These sections from Snowflake were abandoned in 1962. The line is constructed of 85 pound steel with a gross carrying capacity of 220 thousand pounds. There are two delivery points on the line, Purves and Snowflake.

Grain receipts in the 10 years ending 1974-75 averaged 596 thousand bushels annually, equal to 36 thousand bushels per mile of track.

The area served by this line is bordered on the south by the United States boundary. Alternate delivery points are on the La Riviere and Napinka Subdivision to the north. Abandonment of this line would result in an additional haul of 14 miles for many

producers and for a very few a total haul of 20 to 25 miles.

The Commission recommends that the Snowflake Subdivision be abandoned in 1981.

Canadian National - Wakopa Subdivision

- From Greenway to Neelin - 17.8 miles

This line was constructed in 1903-04 by the Western Extension Railway and originally ran from Greenway to Wakopa and Deloraine. The Neelin to Deloraine portion was abandoned in 1960.

The line is constructed with 56 pound steel and has a gross carrying capacity of 177 thousand pounds. There are two delivery points on the line at Glenora and Neelin. There are no plans to renovate or improve these plants.

Grain receipts on this line have averaged 509 thousand bushels annually in the 10 year period ending 1974-75. Average receipts are equal to 29 thousand bushels per mile of track.

Producers in the Neelin area indicated that their alternate choice of delivery point was Killarney, a distance of 16 miles, rather than Cartwright, a distance of 11 miles. Other alternate points are Baldur and Belmont to the north. With abandonment producer trucking distance would not exceed 17 miles.

The Commission recommends that the Wakopa Subdivision be abandoned in 1978.

Canadian National - Carman Subdivision

- From Carman Junction to Roseisle, Manitoba - 59.0 miles.
- From Notre Dame Junction to Belmont, Manitoba - 48.5 miles

This subdivision was built by a variety of Companies between 1901 and 1905. It is constructed with 55 to 60 pound steel and has a gross carrying capacity of 177 thousand pounds.

The Graysville to Roseisle section, 8.5 miles, has had no traffic since 1974. The line from Carman Junction to Carman serves one of the more productive areas of Manitoba. All four delivery points, Sanford, Brunkild, Sperling and Homewood, have good elevator facilities. This section of the line has an average handle of 2.4 million bushels, or equal to 56 thousand bushels per mile of track. Manitoba Pool state their elevator at Graysville is in poor condition, and has a limited life. The portion of this line between Somerset and Belmont has average annual receipts of 2.3 million bushels, in the 10 years ending 1974-75, equal to 58 thousand bushels per mile of track.

The Commission recommends:

- 1) the portion of this subdivision between Carman Junction and Carman, and the portion between Belmont and Somerset be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 2) the portion between Somerset and Notre Dame Junction be abandoned in 1978.
- 3) that portion of the subdivision between Graysville and Carman be abandoned in 1980, and;

- 4) that portion between Graysville and Roseisle
be abandoned at June 30th, 1977.

Canadian National - Notre Dame Subdivision

- From Notre Dame Junction to Notre Dame des Lourdes-2.6 miles

This line was constructed by the Canadian Northern in 1906-1907 with 60 pound steel. It has a gross carrying capacity of 177 thousand pounds.

Grain receipts on this line averaged 330 thousand bushels per year in the 10 year period ending 1974-75. The 8.6 miles of the Canadian National Subdivision between Somerset and Notre Dame Junction serve this subdivision exclusively. On the basis of 11.2 miles this line originates 29 thousand bushels per mile of track. Notre Dame is the only delivery point on this line. Grain constitutes 90 percent of the lines traffic. Fertilizer, coal and agricultural implements made up 10 carloads of inbound traffic. Manitoba Pool do not plan to repair it's plant or to replace the elevator lost in a 1974 fire. Alternate delivery points are available at Rathwell, 8 miles to the north, over a paved highway, or Altamont and Somerset 11 and 12 miles south. Gravel deposits in the area are not of satisfactory quality for rail ballast, and it is doubtful that limestone in the vicinity of Babcock will require rail transport in the future.

The Commission recommends that the Notre Dame Subdivision be abandoned in 1978.

CP Rail - Carman Subdivision

- From Krongart to Plum Coulee, Manitoba - 7.9 miles

This line was constructed by both the Manitoba Southwest Colonization Railway and Midland Railway Company of Manitoba between 1890 and 1907. It originally extended from Elm Creek to Plum Coulee. Krongart was the only delivery point served by the Krongart - Plum Coulee section. The elevator there closed December 15th, 1976.

The Commission recommends that this portion of the CP Rail Carman Subdivision be abandoned June 30, 1977.

Canadian National - Miami Subdivision

- From Morris to Somerset, Manitoba - 62.1 miles

This line was built by the Northern Pacific and Manitoba Railway in 1889-90. It was subsequently absorbed in the Canadian National Railway system.

The line is constructed of 56 to 60 pound steel and has a gross carrying capacity of 177 thousand pounds.

Grain receipts on this line averaged 2.7 million bushels per year in the 10 year period ending 1974-75. Receipts per mile of track equal 44 thousand bushels. The line serves ten delivery points, Smithspur, Lowe Farm, Kane, Myrtle, Roland, Jordan, Miami, Rosebank, Deerwood and Altamont.

The Commission recommends that this subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Wawanesa Subdivision

- From M and B Junction to Wawanesa - 22.7 miles.

This line was originally built in 1898 by the Northern Pacific and Manitoba Railway Company and ran from Morris to Brandon.

The line is constructed with 56 pound steel and has a gross carrying capacity of 177 thousand pounds.

Grain receipts on the line averaged 872 thousand bushels per year in the 10 year period ending 1974-75, equal to 38 thousand bushels per mile of track.

Elevators at the two delivery points on the line are in good to excellent condition. A new elevator was built at Rounthwaite in 1974, and the Wawanesa elevator was renovated in 1975.

The average hauling distance for producers to Rounthwaite is 5.2 miles, and Wawanesa 6.0 miles. When the line is abandoned producers at Rounthwaite will have an additional haul of 9 miles, and at Wawanesa an extra 8 miles, a few producers will be forced to haul up to 20 miles.

The Commission considered a number of alternative rail operations for the line. However, it found the additional hauling distances for producers, following abandonment, were not unreasonable. Manitoba Pool Elevators stated that if the line is abandoned it could move the Rounthwaite elevator to the CP Rail line near Methven, thereby reducing the additional haul for producers at both Wawanesa and Rounthwaite.

The Commission recommends that the Canadian National
Wawanesa Subdivision be abandoned in 1981.

TABLE XI.2
Commission Recommendations For Category "B" Branch Lines
Region 2

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 DEC.31		1978	1979	1980	1981
CP ALIDA	LAUDER	ALIDA	54.5			54.5					
CP LYLETON	LYLETON	DALNY	15.3			15.3					
		DALNY	22.2		22.2						
CP SNOWFLAKE	SNOWFLAKE	WOODBAY	16.6								16.6
CN HARTNEY	ELGIN	SCARTH	40.9			40.9					
	BELMONT	ELGIN	42.0		42.0						
CN CARMAN	SOMERSET	NOTRE DAME JCT.	8.6					8.6			
	ROSEISLE	GRAYSVILLE	8.5			8.5					
	GRAYSVILLE	CARMAN	6.9							6.9	
	BELMONT	SOMERSET	39.9		39.9						
	CARMAN JCT.	CARMAN	43.6		43.6						
CN NOTRE DAME	NOTRE DAME JCT.	NOTRE DAME DE LOURDES	2.6					2.6			
CP CARMAN	KRONSGART	PLUM COULEE	7.9			7.9					
CN WAWANESA	WAWANESA	M & B JCT.	22.7								22.7
CN MIAMI	MORRIS	SOMERSET	62.1		62.1						
CP ARCOLA	SCHWITZER	ARCOLA	96.0	96.0							
CN WAKOPA	GREENWAY	NEELIN	17.8	—	—	—		17.8		—	—
TOTAL REGION 2			508.1	96.0	209.8	127.1		29.0		6.9	39.3


REGION 3


LEGEND

 Basic Network, Guaranteed to Jan. 1, 2000


Commission Recommendations


 To be added to the Basic Network

 To be transferred to The Prairie Rail Authority

 To be abandoned, 1977-1981

 New construction

 Transfer from CP Rail to CNR

 Transfer from CNR to CP Rail

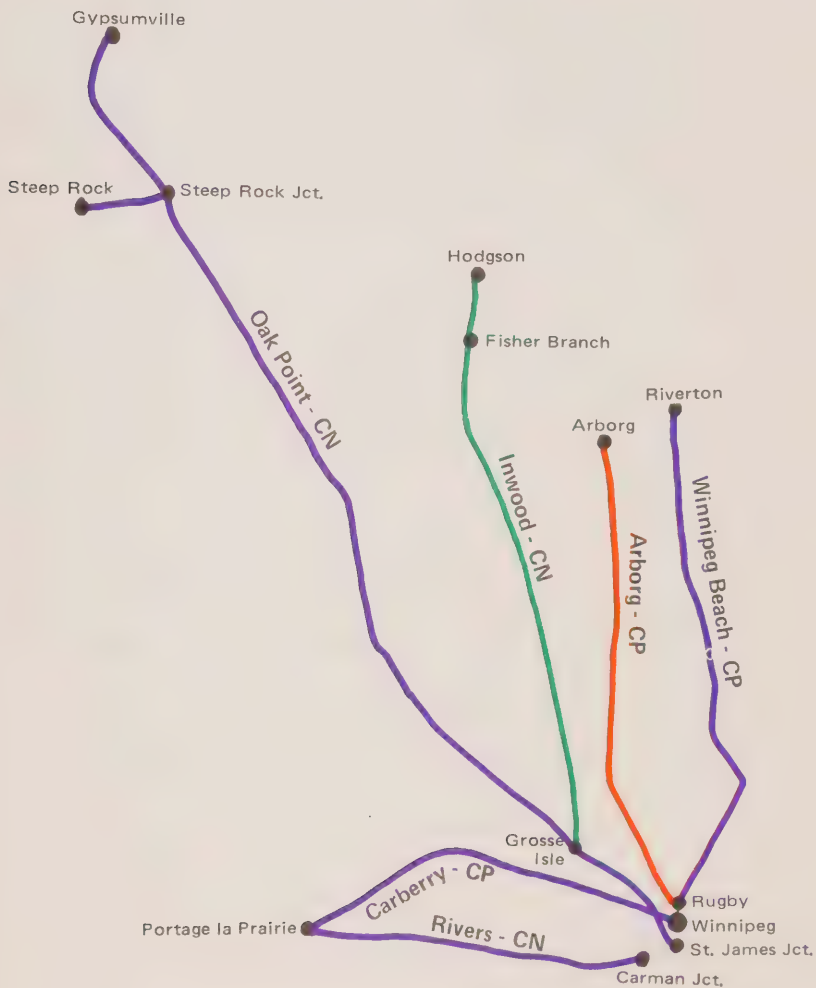


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REGION 3

The Interlake

The Interlake region is a unique geographic area. Due to the special nature of this region with its mix of arable and non-arable land, its four railway subdivisions and its development potential, this area was subjected to two studies to thoroughly examine all methods and railway configurations for serving the region.

These studies were:

- 1) a joint Canadian National Railway - C.P. Rail study,
- 2) a P.S. Ross & Associates study.

These studies were carefully reviewed by the Commission in arriving at its recommendations.

Canadian National - Inwood Subdivision

- From Grosse Isle to Hodgson, Manitoba - 80.9 miles.

The line was constructed by Canadian Northern Railway between 1903 and 1914. It is laid with 56 to 60 pound rail and has gross carrying capacity of 177 thousand pounds.

Although there are several small communities on the subdivision, there are only two grain delivery points on the line: Broad Valley and Fisher Branch. Average grain receipts for the ten year period ending 1974-75 were 708 thousand bushels equal to nine thousand bushels per track of mile.

Given the amount of haulage necessary, the relative isolation of the point, and the potential agricultural production to the north of the end of the subdivision, it is evident that the Fisher Branch area must be served.

C.P. Rail - Arborg Subdivision

- From Rugby Junction to Arborg, Manitoba - 74.3 miles.

This line from Rugby Junction to Stonewall was built by the Dominion Government in 1880 and placed in operation in 1881. It was later transferred to the Canadian Pacific Railway. The line was lengthened to Teulon as the "Teulon Extension" in 1898. The remainder of the line was built in stages with the final portion reaching Arborg in 1910.

The line is laid with 80 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

This subdivision serves the centres of Stonewall, Balmoral, Gunton, Teulon, Malonton, Fraserwood, Meleb, Silver and Arborg. This subdivision has a ten year average receipt of 2.3 million bushels of grain equal to 31 thousand bushels per mile of track.

Commission Recommendations for the Interlake Region

The Commission recommends that the Interlake region be serviced in the following manner, given the presence of the basic network lines, the Canadian National Oak Point and the C.P. Rail Winnipeg Beach lines:

- 1) that the Arborg C.P. Rail subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority;

Three alternatives were defined and examined for servicing the elevators at Fisher Branch. These were:

- a) retention of the Canadian National Inwood subdivision,

- b) build a new rail link (19 miles) from Arborg to Poplarfield.
- c) provide service at Fisher Branch through the operation of off-track elevators.

The economics of each of these options was examined and the Commission has concluded that option c) the operation of off-track elevators represents significantly lower costs on a bushel basis, and at the same time can provide good service.

2) The Commission recommends that:

- i) the 9.4 miles of the Canadian National Inwood Subdivision between Fisher Branch and Hodgson be abandoned December 31, 1977; and,
- ii) the 71.5 miles of the Inwood Subdivision between Grosse Isle and Fisher Branch be abandoned in 1979 and that service be provided by commercial truck from the elevators at Fisher Branch to Arborg.

The off-line elevator concept is discussed more fully in Chapter 5, Page 144.

TABLE XI.3
Commission Recommendations For Category "B" Branch Lines
REGION 3

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 Dec. 31		1978	1979	1980	1981
CA INWOOD	GROSSE ISLE	FISHER BRANCH	71.5						71.5		
	FISHER BRANCH	HODGSON	9.4				9.4				
CP ARBORG	RUGBY	ARBORG	<u>74.3</u>		<u>74.3</u>		<u> </u>		<u> </u>		
TOTAL REGION 3			155.2		74.3		9.4		71.5		

REGION 4

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

++++ Transfer from CNR to CP Rail



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REGION 4

There is no area in Western Canada which is overbuilt with railways to as great an extent as the area to the north-west of Brandon bounded by the Carberry Canadian National Railway line on the south and the Rosburn Canadian National Railway line to the north. In a space of 50 miles, the area is traversed in an east-west direction by eight railway subdivisions. There has been no rail abandonment in this area since construction. Although there has been some rationalization of the grain handling system, it has been relatively slow to occur. In the face of rapidly escalating costs of grain elevator operation, it is evident that many of the fully depreciated, physically sound facilities will be rendered uneconomical in the very near future.

Grain company managers informed the Commission that in 1970 a fully depreciated elevator was economically viable if it had an annual handle of 150 thousand bushels. By 1975 a handle of 250 thousand bushels was required and it is estimated that by 1980, any older elevator handling less than 500 thousand bushels, and any new elevator handling less than one million bushels will be non-viable. Even drastic alterations to handling tariffs will not overcome the difficulties because larger scales and new driveways will be required for the older houses along with new longer car spots.

Just as elevators with low handlings will not be rendered viable even with altered tariffs, many rail lines with low density traffic will not be rendered compensatory even if new rates were established which would permit railways to receive higher revenue for grain haulage.

Under these circumstances, it is evident that a drastic reduction in the number of grain delivery points will occur over the next few years. This reduction in handling facilities is inevitable and in the interests of economy and improved service should be accompanied by a reduction in railway mileage.

To recommend too rapid an adjustment of the system would overtax the building capacity of the grain companies and cause considerable immediate disruption in delivery patterns. As stated elsewhere in this report, the Commission is of the opinion that the configuration of the grain related rail network will eventually be determined by the logical location of the grain elevators. It is considered that with the farmer owned system handling some 70 percent of the grain that in the long run it is the farmer himself who will dictate a practical configuration. However, in this area where alternate hauling distances are short to main and secondary main lines and where the majority of the elevators are either not viable or marginally viable, fairly drastic alterations are warranted.

REGION 4

CP Rail - Miniota Subdivision

- From Brandon to Miniota, Manitoba - 71.7 miles, plus a 3.6 mile spur running eastwards from Gautier Junction into Rapid City.

In 1886, a railway line was constructed from Minnedosa to Gautier by the Saskatchewan and Western Railway. In 1888 the Great North Central Railway built a line from Gautier to Hamiota. It was extended westward to Miniota and southward to Brandon in 1889-90. On June 11, 1900, operation of all this trackage was taken over by the Canadian Pacific Railway. The section from Minnedosa to Rapid City was abandoned in 1963, leaving the 3.6 mile "Rapid City Spur".

The line is constructed with 85 pound steel and has gross carrying capacity of 220 thousand pounds.

This subdivision serves seven grain delivery points: Forrest, Rapid City, Floors, Oak River, Hamiota, Crandall and Miniota.

Grain receipts on this subdivision averaged 2.1 million bushels per year in the ten year period ending 1974-75. Average receipts equal 30 thousand bushels per mile of track.

The Commission recommends that:

- 1) the CP Rail Miniota subdivision be connected to the Canadian National Railway Rivers subdivision at Quadra;
- 2) the 11.4 mile section of the Miniota subdivision

from Quadra to Hamiota be retained and placed under the jurisdiction of the Prairie Rail Authority;

- 3) the 8.8 mile portion of the Miniota subdivision from Quadra to Miniota be abandoned in 1981;
- 4) the 55.0 mile portion of the Miniota subdivision from Hamiota to Brandon be abandoned in 1981; and
- 5) upon abandonment of the Brandon to Hamiota section that the Hamiota to Quadra section be operated by the Canadian National Railway.

CP Rail - Lenore Subdivision

- From Forrest to Lenore, Manitoba - 40.9 miles.

The line was built by the Canadian Pacific Railway in 1901-02 as the "Lenore Extension" of "The Great Northwest Central Railway Co.", a company leased by the Canadian Pacific Railways on April 6th, 1900. It went into operation on June 7th, 1903.

The line is constructed with 80 pound steel and has a gross carrying capacity of 220 thousand pounds.

The Lenore subdivision is rather unique in that it serves a major CP Rail gravel pit located near Wheatland at Mile 16.0. CP Rail are rather indefinite about the future of this pit which provides crushed rock ballast. However, indications are that CP Rail will continue service to this pit for the foreseeable future. The company indicated that different standards apply for "on company

service" tracks and railways for public use. They request therefore that this subdivision be abandoned as far as commercial use is concerned.

This subdivision has three grain delivery points: Bradwardine, Kenton and Lenore.

Grain receipts on this subdivision averaged 924 thousand bushels per year for the ten year period ending 1974-75 representing 22 thousand bushels per mile of track.

Manitoba Pool Elevator Company stated that the Lenore elevator is rapidly becoming functionally obsolete.

Although there is no grain delivery facility at Wheatland, the Oo-za-we-kwun Industrial Centre at this point does use the rail service to a limited extent and has potential for greater utilization.

The Commission recommends that every opportunity be extended for the development of industry in Western Canada and that this facility be served by rail.

The Commission recommends that:

- 1) the CP Rail Lenore subdivision be connected by a .4 mile link to the Canadian National Railway Rivers subdivision at a point near Wheatland;
- 2) the 15.4 mile portion of the subdivision from the connection to Kenton be retained and placed under the jurisdiction of the Prairie Rail

Authority and operated by Canadian National
Railway; and

- 3) the 19.0 mile section of this subdivision between
Wheatland and Forrest be abandoned in 1980.
- 4) the 6.9 mile section of this subdivision between
Kenton and Lenore be abandoned in 1981.

The Canadian National Railways Carberry, Neepawa, Rapid City and Rosssburn Subdivisions are considered sequentially because of the common origin of trains and the operation of the subdivisions.

The Canadian National railway trains and crews servicing these four subdivisions originate in the Symington Yards at Winnipeg. They deliver trains of empties out over the Rivers Subdivision to Petrel Junction, north over the Carberry Subdivision to Carberry Junction, thence on the Neepawa Subdivision to Neepawa. Depending on car allocations, trains are made up in Neepawa to service the Rapid City, the Rosssburn, the Neepawa as well as the Ste Rose Subdivision.

At one time trains and crews were located in Neepawa for the servicing of these subdivisions. However, this meant that crews were retained full time for operations "as and when required". Canadian National felt that it was more efficient to run trains from Winnipeg to service these subdivisions on an "as and when required" basis.

Canadian National - Carberry Subdivision

- From Petrel Junction to Carberry Junction, Manitoba -
10.0 miles

This line was constructed in 1903 with light rail which was replaced with 80 and 85 pound rail in 1955-56, and has a gross carrying capacity of 220 thousand pounds.

The sole purpose of this portion of the Carberry subdivision is to provide Canadian National access to the Neepawa, Rapid City

and Rossburn subdivisions.

Given the recommendations for alternate servicing of these other subdivisions, it is recommended that the Carberry subdivision Mile 13.0 to Mile 23.0 be abandoned in 1978.

Canadian National - Neepawa Subdivision

- From Muir to Helston, Manitoba - 11.5 miles
- From Carberry Junction to Neepawa Junction, Manitoba - 47.1 miles.

This line was built in 1902-03 by Canadian Northern Railway Company. It is constructed with 60 and 80 pound steel and, except for a few miles used for bridge traffic, has a gross carrying capacity of 177 thousand pounds.

Currently the subdivision is operated in two sections and will be dealt with separately here because of the variation in operations.

- a) - Muir to Carberry Junction - 11.5 miles

This portion of the subdivision is laid with 60 pound steel and has a gross carrying capacity of 177 thousand pounds. This portion of the subdivision serves one delivery point at Helston. Grain receipts have averaged 259 thousand bushels per year for the ten year period ending 1974-75, equal to 23 thousand bushels per mile of track.

The Commission recommends that the 11.5 mile section of the Neepawa Subdivision from Muir to Helston be abandoned in 1978.

- b) - Carberry Junction to Neepawa Junction (McCreary)- 47.1 miles.

The section from Carberry Junction, Mile 23.5 to Junction

with the Rapid City subdivision at Hallboro, Mile 26.9, serves as an access to the Rapid City and Rossburn subdivisions.

The portion of the subdivision from Hallboro, Mile 26.9, to Neepawa, Mile 33.1, serves as access to other subdivisions.

From Neepawa, Mile 33.1, to Rossburn Junction, Mile 37.8, the subdivision provides access to the Rossburn subdivision.

The portion of the line from Rossburn Junction, Mile 37.8, to Neepawa Junction, Mile 70.6, serves the delivery points of Eden and Kelwood.

Grain receipts on this portion of the subdivision for the ten year period ending 1974-75 averaged 672 thousand bushels per year, representing 20 thousand bushels per mile of track.

The Manitoba Pool Elevators at Eden are in poor condition and the company has no plans to renovate. The new Manitoba Pool Elevator at Neepawa, 11 miles to the south, was planned to accommodate the grain currently delivered to Eden. It is recognized that for many producers, abandonment of the line will entail an extra haul of 11 miles. However, through the utilization of the alternate facilities at Neepawa, Plumas and Arden, few if any producers will have more than a 20 mile haul to their nearest delivery point.

The United Grain Growers Limited elevators at Kelwood are also in poor condition. Currently a new large United Grain Growers elevator is under construction at McCreary ten miles to the north. Abandonment of this subdivision and the phasing out

of Kelwood as a delivery point means an additional 10 mile haul for some producers, but no producer would be forced to haul more than 20 miles to the nearest delivery point.

The Commission recommends that:

- 1) the 9.6 mile section of the Neepawa Subdivision between Carberry Junction and Neepawa be abandoned in 1978;
- 2) the 32.8 mile section of this subdivision between Rossburn Junction and Neepawa Junction be abandoned in 1978;
- 3) the 4.7 mile section of the Neepawa subdivision between Neepawa and Rossburn Junction be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 4) the Canadian National Railways have access to the Neepawa Subdivision through joint running rights over the CP Rail Minnedosa Subdivision from Portage la Prairie or Gladstone.

Canadian National - Rossburn Subdivision

- From Rossburn Junction to Russell, Manitoba - 104.3 miles

The first 11 miles of this line were built by the Morden and North West Railway in 1902-03. The remainder was constructed by the Canadian Northern and put into operation in 1908.

The first 21 miles and the last mile are laid with 56 pound rail and the remainder with 60 pound rail. The subdivision has a gross carrying capacity of 177 thousand pounds.

This subdivision serves ten delivery points: Russell, Clanwilliam, Erickson, Sandy Lake, Elphinstone, Oakburn, Vista, Rossburn, Angusville and Silverton.

Grain receipts for the ten year period ending 1974-75 averaged 4.4 million bushels per year, representing 43 thousand bushels per mile of track.

The Commission recommends that:

- 1) this subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) the railway examine the possibility of shortening the subdivision by building a link from a point near Mile 10.0 on the Rossburn Subdivision to a point near Franklin on the CP Rail Minnedosa subdivision and that the subdivision be serviced by extending the joint running rights for Canadian National over the CP Rail Minnedosa subdivision to the point of linkage; and
- 3) the portion from Mile 0.00 to the link, approximately 10.0 miles then be abandoned.

The Commission also recommends that Canadian National Railways and CP Rail carry out a joint study of the economics of constructing a link from approximately Mile 10.0 of the Canadian National Rossburn Subdivision to a point on the CP Rail Minnedosa Subdivision near Franklin. Two alternatives are then

available for operation of the Rossburn Subdivision - 1) by CP Rail, 2) by Canadian National with running rights over CP Rail from Portage la Prairie to Franklin. This connecting link would free 10 miles of the Rossburn Subdivision and 4.7 miles of the Neepawa Subdivision for abandonment. Results of this study are to be made available to the Minister of Transport by December 31, 1977.

As indicated in the recommendation on the CP Russell Subdivision, a connection between Canadian National Railway Rossburn Subdivision and the CP Rail Russell Subdivision should be made at Russell to allow Canadian National to service the current Russell CP Rail Subdivision as an extension of the Rossburn Subdivision.

Canadian National - Rapid City Subdivision

- From Hallboro to Beulah, Manitoba - 74.4 miles

This line was constructed by the Western Extension Railway Company between the years 1909 and 1910, with 60 pound rail and has a gross carrying capacity of 177 thousand pounds.

This subdivision serves seven delivery points: Mentmore, Moline, Cardale, McConnell, Decker, Isabella and Beulah.

Grain receipts on this subdivision for the ten year period ending 1974-75 averaged 1.9 million bushels, representing 26 thousand bushels per mile of track.

All delivery points on the line are operated by Manitoba Pool Elevators. Manitoba Pool have stated that the current economics of operation of elevators are such that all of the points on the subdivision would be economically non-viable if major renovations

or reconstruction were necessary.

The new Manitoba Pool Elevator at Neepawa was designed to accommodate the grain from the Mentmore area.

Plans are currently being made by Manitoba Pool Elevators to build on the Canadian National Railway main line in the vicinity of Miniota. It is contemplated that this new facility will accommodate the grain from Beulah and Isabella.

The facilities at Decker are considered to be in poor condition and are unlikely to be renovated. Likewise, the Moline facilities are also prime candidates for closure.

One of the elevators at McConnell is in good condition with a large scale. McConnell is within eight miles of Hamiota to the south. Hamiota is a viable community with a variety of services on a line recommended for retention. McConnell is within 15 miles of Shoal Lake to the north. The average increased haul from this point should the line be abandoned is estimated at less than five miles and the longest total haul to the nearest elevator not over 15 miles.

Cardale is an independent Manitoba Pool Association with a good facility and a ten year average handle of 359 thousand bushels, the highest of any point on the line. The current average haul distance to Cardale is four miles; the average hauling distance after abandonment would be approximately eight miles and the greatest hauling distance of any farmer to the closest point would be not over 15 miles.

Several different options for providing efficient and effective service to parts of this subdivision were examined. These included links:

- a) to the CP Rail Miniota subdivision at Rapid City;
- b) between Floors and Cardale, or
- c) between Hamiota and a point near McConnell.

Another option examined was a link between Canadian National Railway Rivers subdivision near Miniota to the Rapid City subdivision near Beulah.

In all cases, the pending phasing out of grain elevators due to the changing economics of grain handling combined with the reasonable hauling distance to alternate points rendered the options invalid.

In consideration of the facts presented to the Commission, it is the recommendation of the Commission that the Canadian National Rapid City subdivision be abandoned in 1978.

Canadian National - Oakland Subdivision

- From Delta to Amaranth, Manitoba - 53.3 miles.

This subdivision was built by the Northern Extension Railway between the years 1889 and 1913. It is laid with 60 pound steel except from Mile 0.00 to 0.08 which was laid with 85 pound steel in 1952 and has a gross carrying capacity of 177 thousand pounds.

This subdivision serves four grain delivery points: Oakland, Longburn, Langruth and Amaranth.

Grain receipts on this line for the ten year period ending

1974-75 averaged 1.2 million bushels, representing 23 thousand bushels per mile of track.

It is not clear to the Commission exactly what the status is of the gypsum mining activities at Amaranth. However, it is known that there are large deposits of high quality gypsum at Amaranth and it is almost certain that given the limited gypsum deposits in Manitoba these will be developed within the next few years. When these deposits are exploited, rail haul would appear the logical transportation mode.

The Commission recommends that this subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

The Commission also recommends that Canadian National Railways and CP Rail carry out a joint study of the economies of constructing a link between the Canadian National Oakland subdivision at Cawdor and the CP Rail Minnedosa subdivision at Westbourne. This would permit the abandonment of approximately 20 miles of the Oakland subdivision from Portage La Prairie to Cawdor. This joint study should then examine the options of CP Rail operating the Oakland subdivision, and of Canadian National continuing operation of the Oakland subdivision by having running rights over the CP Rail Minnedosa subdivision. Results of this joint study are to be made available to the Minister of Transport by December 31, 1977.

CP Rail - Russell Subdivision

- Binscarth to Inglis, Manitoba - 23.9 miles

The Russell subdivision was constructed in 1887 as the "Shell

River Branch" of the "Manitoba and Northwestern Railway Company of Canada", from Binscarth northward to Russell. Canadian Pacific Railway placed this part in operation on June 11th, 1900. Extensions to the line were placed in operations as follows: Russell to Cracknell, December 28th, 1920; Cracknell to Inglis, November 22nd, 1922.

The line was constructed with a mixture of 72, 80 and 85 pound steel. Gross carrying capacity is 220 thousand pounds.

There are three grain delivery points on the line: Russell, Cracknell and Inglis.

Grain receipts on the subdivision for the ten year period ending 1974-75 were 1.4 million bushels, representing 57 thousand bushels per mile of track.

The Commission recommends that:

- 1) the CP Rail Russell subdivision immediately be joined to the Canadian National Railway Rossburn subdivision at Russell;
- 2) the portion of the Russell subdivision from Russell to Inglis be retained and operated by Canadian National Railway and placed under the jurisdiction of the Prairie Rail Authority; and
- 3) the portion of the Russell CP Rail subdivision from Binscarth, Mile 0.00, to Russell, Mile 11.0, be abandoned December 31, 1977.

Canadian National - Tonkin Subdivision

- From Russell, Manitoba to Wroxton, Saskatchewan - 48.4 miles.

This line was built by the Canadian Northern Railway Company between 1908 and 1928. It is laid with 60 pound steel and has a gross carrying capacity of 177 thousand pounds. The total Tonkin subdivision is 112 miles in length and extends as far west as Parkerview, Saskatchewan. The section between Wroxton and Parkerview is dealt with in Region 7.

The portion of the subdivision from MacNutt to Wroxton has three delivery points: MacNutt, Calder and Wroxton. These points combined averaged 1.7 million bushels of handlings over the past ten years, equal to 105 thousand bushels per mile of track.

The Commission recommends that:

- 1) the portion of the subdivision from Russell, Mile 0 to MacNutt, Saskatchewan, Mile 32.7, be abandoned on June 30th, 1977;
- 2) the portion from MacNutt, Mile 32.7 to Wroxton, Mile 48.4, be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Varcoe Subdivision

- From Varcoe to Wellwood, Manitoba - 28.8 miles.

The line was constructed by Canadian Pacific Railway during the years 1889 - 1905. It is laid with 80 and 85 pound rail and has a gross carrying capacity of 220 thousand pounds.

The Wellwood elevator was closed in 1974 when Petre1 opened

and the one at Oberon also closed in 1974 when Harte opened. There has therefore been no service beyond Brookdale for the past three years.

There are currently two delivery points on the subdivision: Brookdale and Moorepark.

Grain receipts on this subdivision for the ten year period ending 1974-75 averaged 740 thousand bushels, equal to 26 thousand bushels per mile of track.

Both United Grain Growers Limited and Manitoba Pool Elevators have built excellent new high throughput elevators in the vicinity on the main line Canadian National Railway to the south and at Neepawa on the Minnedosa CP Rail subdivision to the north. These elevators have adequate capacity and are within a reasonable hauling distance to accommodate the grain normally hauled to Brookdale.

The Manitoba Pool Elevator at Justice with a capacity to handle a ratio of less than two is currently being modified and can accommodate much of the grain currently handled at Moorepark while Minnedosa can accommodate the remainder.

The Commission recommends that the CP Rail Varcoe subdivision be abandoned on December 31, 1977. In so doing, the Commission assumes much of the grain will be hauled to Justice and request the assurance that the Canadian National Railway enforce the regulation with respect to the length of time that a train is allowed to obstruct the public crossing.

Canadian National - Pleasant Point Subdivision

- From Brandon Junction to Edwin, Manitoba - 40.9 miles.

The line was constructed by the Western Extension Railway between the years 1903 and 1904. The line has 85 pound steel with a gross carrying capacity of 220 thousand pounds.

This subdivision which formerly ran from Portage La Prairie to Brandon Junction was severed by the construction of the Assiniboine River floodway above Portage. The Province of Manitoba provided subsidy to the Canadian National Railway to serve the points from Brandon Junction rather than Portage. This explains the reason for the subdivision operation being backward to the normal traffic flow.

This subdivision currently serves one grain delivery point at Edwin.

With a ten year average handlings for the period ending 1974-75 of 175 thousand bushels, the point has a very limited economic life. Traffic density for this subdivision is equal to four thousand bushels per mile of track.

The Commission recommends that the Pleasant Point subdivision be abandoned on December 31st, 1977.

TABLE XI.4
Commission Recommendations For Category "B" Branch Lines
REGION 4

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 DEC.31		1978	1979	1980	1981
CP RUSSELL	RUSSELL	BINSCARTH	11.0				11.0				
	RUSSELL	INGLIS	12.9		12.9(1)						
CH TONKIN	RUSSELL	MACNUTT	32.7			32.7					
	MACNUTT	WROXTON	15.7		15.7						
CH ROSSBURN	ROSSBURN JCT	RUSSELL	104.3		104.3(3)						
CH NEEPAWA	MUIR	HELSTON	11.5					11.5			
	CARBERRY JCT.	NEEPAWA	9.6					9.6			
	NEEPAWA	ROSSBURN JCT.	4.7		4.7(3)						
	ROSSBURN JCT.	NEEPAWA JCT.	32.8					32.8			
CH CARBERRY	CARBERRY JCT.	PETREL JCT.	10.0					10.0			
CH RAPID CITY	HALLBORO	BEULAH	74.4					74.4			
CH OAKLAND	DELTA JCT.	AMARANTH	53.3		53.3						
CP VARCOE	WELLWOOD	VARCOE	28.8				28.8				
CH PLEASANT POINT	EDWIN	BRANDON JCT.	40.9				40.9				
CP LENORE	LENORE	KENTON	6.9								6.9
	KENTON	WHEATLAND	15.4		15.4(1)(2)						
	WHEATLAND	FORREST	19.0							19.0	
CP MINNIOTA	QUADRA	HAMIOTA	11.4		11.4(1)						8.1
	QUADRA	MINIOTA	8.8								55.1
	HAMIOTA	BRANDON	55.0								
TOTAL REGION 4			559.1		217.7	32.7	80.7	138.3		19.0	70.0

(1) To Be Transferred to CNR.

(2) LINK TO REVERS SUBDIVISION (WHEATLAND TO RIVERS - .4 MILES).

(3) CH TO HAVE RUNNING RIGHTS OVER CP MINNEDOSA SUBDIVISION BETWEEN PORTAGE AND NEEPAWA.

REGION 5

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

++++ Transfer from CNR to CP Rail



Government of Canada

Gouvernement du Canada

Hall Commission

Commission Hall



REGION 5

Canadian National - Ste. Rose Subdivision

- From Ochre River to Rorketon, Manitoba - 37.1 miles.

This line was constructed between the years 1909 and 1924 by the Canadian Northern Railway. It is laid with a mixture of 55, 56 and 60 pound steel. Gross carrying capacity of the line is 177 thousand pounds.

There are two grain delivery points on the line: Ste Rose and Rorketon at Mile 37.1. Grain receipts for the ten year period ending 1974-75 averaged 763 thousand bushels per year equal to 20 thousand bushels per mile of track.

It is forecast that several thousand acres of land to the east of this subdivision will come under cultivation as drainage in the area improves and new technology is applied to crop production.

The Commission is of the opinion that although the retention of the total subdivision cannot be justified on economic grounds, the Rorketon delivery point cannot be abandoned at present because of the hardships it would inflict on many producers of the area.

The Commission recommends that the Ste Rose subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority. The Commission further recommends that this subdivision be serviced out of the Canadian National Railway's Dauphin divisional point instead of Winnipeg.

Canadian National - Winnipegosis Subdivision

- From Sifton Junction to Winnipegosis, Manitoba - 20.1 miles.

This line was constructed in 1897 by the Lake Manitoba Railway and Canal Company. It was laid with 56 pound rail with a gross carrying capacity of 177 thousand pounds.

This subdivision serves two grain delivery points: Fork River and Winnipegosis. Grain receipts for the ten year period ending 1974-75 averaged 783 thousand bushels equal to 39 thousand bushels per mile of track.

This is an "end of steel" situation in which the farmers at the north end of the subdivision already experience considerable hardship due to inadequate services. The removal of Fork River and Winnipegosis as delivery points would aggravate these difficulties.

There is some light industry at Winnipegosis which used some 80 cars of raw material in 1975. The Commission suggests that every encouragement should be lent to further development of this nature.

The Commission recommends that the Winnipegosis subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Cowan Subdivision

- From North Junction to Swan River, Manitoba - 98.5 miles.

This line was constructed by Winnipeg Great Northern Railway between the years 1896 and 1899 of 85 pound rail. The gross carrying capacity is 220 thousand pounds.

The grain delivery points served by the subdivision are Sifton, Ethelbert, Pine River, Renwer and Minitonas. The United Grain Growers elevator at Renwer is scheduled to close at the end of the 1976-77 crop year.

Grain receipts on this line averaged 1.9 million bushels for the ten year period ending 1974-75 equal to 19 thousand bushels per mile of track.

This subdivision is the main access route to the highly productive Swan River area.

This subdivision also serves to bridge grain and pulpwood traffic as well as a thrice weekly passenger service between Winnipeg and Churchill, and a five times weekly general freight service.

The high level of utilization of this subdivision along with the high degree of isolation which would result from its abandonment make it imperative that this subdivision be retained.

The Commission recommends that the Cowan subdivision be retained and placed in the basic network, guaranteed until January 1st, 2000.

Canadian National - Erwood Subdivision

- From Swan River, Manitoba to Hudson Bay, Saskatchewan-101.1 miles.

This line was constructed by Canadian Northern Railway between the years 1899 and 1903, of 85 pound rail. Gross carrying capacity on the line is 220 thousand pounds.

There are grain delivery points at Swan River, Bowsman and Birch River. Grain receipts for the ten year period ending 1974-75 averaged 3.0 million bushels per year equal to 30 thousand bushels per mile of track. In addition to the grain traffic, between 600 and 1,000 carloads of pulpwood per year are generated on the subdivision, while 500 carloads of petroleum fuel and miscellaneous items are taken in.

Over three thousand carloads of crushed limestone are hauled off this subdivision each year from the mine north of Mafeking. A new pit has recently been brought into production providing an estimated 25 year supply.

The suggestion has been made that the traffic which currently moves westward from the mine be diverted south over the Preeceville subdivision toward its destination at Regina. The railroad from Hudson Bay to the mine is in good condition. It appears that there is little potential for rail related activity on the northern section of the subdivision.

The Commission recommends that:

- 1) the 50.5 mile section of this subdivision between Swan River and Baden be retained and placed under the jurisdiction of the Prairie Rail Authority; and
- 2) the 50.6 mile section of this subdivision between Baden and Hudson Bay be abandoned in 1978.

Canadian National - Preeceville Subdivision

- From Thunderhill Junction, Manitoba to Kelvington, Saskatchewan
- 113.6 miles.

The Assiniboine subdivision runs for 2.02 miles from Sturgis Junction to Lilian as a connecting link between the west and east portions of the Preeceville subdivision. The first portion of the subdivision from Mile 0.0 to Benito was constructed in 1905-06 by the Western Extension Railway. The remainder of the line was built by Canadian Northern Railway between the years 1909 and 1921. It is

laid with 56 and 60 pound rail and has a gross carrying capacity of 177 thousand pounds.

There are 12 grain delivery points on the subdivision: Kenville, Durban, Benito, Arran, Pelly, Norquay, Hvas, Stenen, Preeceville, Lintlaw, Nut Mountain and Kelvington. The ten year average grain receipts on this subdivision are 8.3 million bushels, equal to 73 thousand bushels per mile of track.

The Commission recommends that:

- 1) the portion of the subdivision from Thunderhill Junction to Sturgis be retained and placed in the basic network, guaranteed until January 1st, 2000; and
- 2) the portion of the subdivision from Lilian (West Sturgis) to Kelvington be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Chelan Subdivision

- From Reserve to Crooked River, Saskatchewan - 60.1 miles.

The line was constructed in the years 1928-29. The rail consists of a mixture of 80 and 85 pound steel that is in fair condition. Gross carrying capacity is limited to 220 thousand pounds.

Grain receipts on the subdivision have averaged two million bushels per year in the ten years ending 1974-75. Average receipts equal 35 thousand bushels per mile of track.

Two grain companies, Saskatchewan Wheat Pool and United Grain Growers operate thirteen elevators at six points: Weekes, Somme

Carragana, Porcupine Plain, Chelan and Bjorkdale. Company condition ratings of their elevators on the subdivision are three good, seven fair and three poor.

The area served by this subdivision is isolated from the remainder of the grain growing areas of Saskatchewan. The Porcupine Provincial Forest acts as a barrier to the south and east. The Northern Provincial Forest lies 15 to 20 miles north of the line and acts as a northern barrier.

Alternate delivery points exist on the CN Tisdale subdivision at distances ranging from 11 to 27 miles from stations on the Chelan subdivision.

An alfalfa dehydrating plant north of Porcupine Plain is dependent on rail service for shipping its production.

Some estimates at the local hearing indicate that 15 to 18 percent of the acreage suitable for crop production has yet to be brought under cultivation.

The Commission recommends that the Chelan subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Arborfield Subdivision

- From Crane Junction to Arborfield, Saskatchewan - 19.4 miles.

This line was constructed in 1929. The rail is in fair condition and except for .29 miles of 60 pound steel, it is all 80 pound steel. Gross carrying capacity on the line is 177 thousand pounds.

Grain receipts on this subdivision have averaged 1.2 million bushels per year in the ten years ending 1974-75. Average receipts equal 64.5 thousand bushels per mile of track.

Agricultural production patterns have recently shifted from grain to alfalfa pellets as indicated by the following table:

CARLOADS BY COMMODITY

<u>Year</u>	<u>Grain</u>	<u>Alfalfa Pellets</u>
1971	866	478
1972	934	703
1973	594	563
1974	439	829

There are two delivery points on the subdivision: Arborfield and Zenon Park. Three grain companies operate six elevators at these two stations. The elevators on the line are in fair condition. With upgrading of scales and driveways at some plants, the elevator facilities will be adequate for many years.

The area served by the Arborfield subdivision is somewhat isolated. The Pasquia Hills to the east of the Northern Provincial Forest act as a barrier to the east. The Carrot River lies between this subdivision and the Canadian National Brooksby subdivision and prevents easy access to the north and west.

The Commission recommends that the Arborfield subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.5
Commission Recommendations For Category "B" Branch Lines
REGION 5

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 DEC. 31		1978	1979	1980	1981
CN ARBORFIELD	CRANE	ARBROFIELD	19.4		19.4						
CN CHELAN	RESERVE	CROOKED RIVER	60.1		60.1						
CN PREECEVILLE	THUNDERHILL JCT.	STURGIS JCT.	65.1	65.1							
	STUGIS JCT.	KELVINGTON	48.5		48.5						
CN WINNIPEGOSIS	SIFTON	WINNIPEGOSIS	20.1		20.1						
CN STE. ROSE	OCHRE RIVER	RORKETON	37.1		37.1						
CN COWAN	NORTH JCT.	SWAN RIVER	98.5	98.5							
CN ERWOOD	SWAN RIVER	BADEN	50.5		50.5						
	BADEN	HUDSON BAY	50.6	—	—			50.6			
TOTAL REGION 5			449.9	163.6	235.7			50.6			

REGION 6

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

++++ Transfer from CNR to CP Rail



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REGION 6

CP Rail Assiniboia Subdivision

- From Amulet to Assiniboia, Saskatchewan - 64.2 miles

This line was built in 1911-12. It is constructed with 80 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

There are seven grain delivery points on the subdivision. These are at Willows, Readlyn, Verwood, Viceroy, Horizon, Glasnevin and Ogema.

Ten year average grain receipts (1965-75) were 2.8 million bushels, representing 44 thousand bushels per mile of track.

This subdivision forms a part of a continuing secondary line through the southern prairies, providing a "bridge" between Southern Alberta, Southern Saskatchewan and the Lakehead.

The Commission recommends that the portion of the Assiniboia Subdivision between Amulet and Assiniboia be retained and placed in the basic network guaranteed until January 1, 2000.

CP Rail Fife Lake Subdivision

- From Coronach to Big Beaver, Saskatchewan - 19.8 miles

This line was constructed in 1929 with 80 pound steel. It has a carrying capacity of 220 thousand pounds.

There are two grain delivery points on the subdivision: Big Beaver and East Poplar.

Average grain receipts for the ten year period ending 1974-75 were 738 thousand bushels, representing 37 thousand bushels per mile of track.

The area serviced by this line is bordered on the south by the United States boundary, and is 20 to 25 miles south of the Canadian National Bengough Subdivision. The Big Muddy Lake to the north and east restricts alternative delivery points.

The Commission recommends that the Fife Lake Subdivision, from Coronach to Big Beaver, be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Amulet Subdivision

- From Ormiston to Cardross, Saskatchewan - 13.1 miles

This line was constructed in 1926 with a mixture of 80 to 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

There are two grain delivery points on this subdivision, Cardross and Crane Valley.

The ten year average grain receipts for the period ending 1974-75, on this portion of the subdivision, were 576 thousand bushels, representing 44 thousand bushels per mile of track.

The Commission recommends that:

- 1) The portion of the Amulet Subdivision between Ormiston and Crane Valley be retained and placed under the jurisdiction of the Prairie Rail Authority.

- 2) The portion of the Amulet Subdivision between Crane Valley and Cardross be abandoned December 31, 1977.

Canadian National - Bengough Subdivision

- From Bengough Junction to Willowbunch, Saskatchewan - 71.5 miles

This subdivision was constructed in two parts. The first 43 miles were built in 1910-11, and the latter 29 miles in 1925/26. It was constructed of a mixture of 60, 80 and 85 pound steel, and has a gross carrying capacity of 177 thousand pounds.

There are five grain delivery points on the subdivision. These are at Willowbunch, Harptree, Bengough, Hardy and Ceylon.

This subdivision serves an area between the CP Rail Assiniboia Subdivision and the CP Rail Fife Lake Subdivision. The Big Muddy Lake inhibits easy access to the South and Willowbunch Lake and Missouri Couteau provide barriers to the north and east.

Average grain receipts in the ten year period ending 1974-75 were 2.6 million bushels, representing 36 thousand bushels per mile of track.

The Commission recommends that the Bengough Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Goodwater Subdivision

- From Radville Junction to Goodwater, Saskatchewan - 26.8 miles

This line was built in 1910. It is constructed with 60

pound steel, and has a gross carrying capacity of 177 thousand pounds.

There are two grain delivery points of the subdivision, Colgate and Goodwater.

The grain traffic on the line for the ten year period ending 1974-75 averaged 704 thousand bushels, representing 26 thousand bushels per mile of track.

Alternate delivery points on the Portal Subdivision of CP Rail, the CP Rail Bromhead Subdivision or on the Canadian National Weyburn Subdivision will create additional distances of between 6.8 and 11.0 miles.

The Commission recommends that the Goodwater Subdivision between Radville Junction and Goodwater be abandoned December 31, 1977.

Canadian National - Avonlea Subdivision

- From Radville to a point near Moose Jaw, Saskatchewan - 88.3 miles

The line was built between the years 1910 and 1918. It is constructed with a mixture of 60, 80 and 85 pound steel and had a gross carrying capacity of 177 thousand pounds.

This subdivision has seven grain delivery points. These are at Tilney, Briercrest, Hearne, Avonlea, Truax, Dummer and Parry. There are no grain delivery points in the 28.8 miles between Parry and the Canadian National Bengough Subdivision.

The ten year average grain receipts for the period ending

1974-75 were 3.2 million bushels, representing 37 thousand bushels per mile of track.

The Commission recommends that:

- 1) The portion between Parry and Moose Jaw be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 2) The portion between Radville and Mile 1.4 (Junction with the Bengough Subdivision) be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 3) The portion between Parry and Mile 1.4 be abandoned June 30, 1977.

Canadian National - Weyburn Subdivision

- From Talmage to Radville, Saskatchewan - 38.0 miles

This line was built in various stages between 1910 and 1928. It is constructed with 60, 80 and 85 pound steel, and has a gross carrying capacity of 177 thousand pounds.

The three delivery points on the subdivision are Radville, Grassdale and Weyburn. Weyburn is also served by the CP Rail Portal Subdivision. This subdivision serves as a link between the Bengough and Goodwater Subdivisions to the Lewvan Subdivision for movement to Regina for furtherance. With the closing of the southern portion of the Avonlea Subdivision it provides the only link for grain off the Bengough Subdivision.

The ten year average grain receipts for the period ending 1974-75 were 2.2 million bushels per year. This equals 57 thousand bushels per mile of track.

The Commission recommends that the portion of the Weyburn Subdivision between Talmage and Radville be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Bromhead Subdivision

- From Gladmar to Minton, Saskatchewan - 6.4 miles

This portion of the Bromhead Subdivision was constructed by Canadian Pacific Railways. It is constructed with 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

This line has one delivery point at Minton. This subdivision is located 21 miles south of the Canadian National Bengough Subdivision. The area serviced by Minton is bordered on the south by the United States boundary and on the west by the Big Muddy. The only alternate delivery point within a reasonable distance is Gladmar.

The ten year average grain receipts for the period ending 1974-75 were 445 thousand bushels, representing 70 thousand bushels per mile of track.

The Commission recommends that the Gladmar to Minton portion of the Bromhead Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Bromhead Subdivision

The Tribune Spur

- From Southall to Tribune, Saskatchewan - 7.0 miles

This line was constructed in 1913. It has 80 pound steel, and has a carrying capacity of 220 thousand pounds.

Tribune is the only delivery point on this Spur. It serves a large grain producing area.

Average grain receipts for the ten year period ending 1974-75 were 717 thousand bushels, representing 102 thousand bushels per mile of track.

The Commission recommends that the Tribune Spur, from Southall to Tribune, be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Lewvan Subdivision

- From Minard Junction to North Regina, Saskatchewan - 116.8 miles

This line was constructed in 1912-13 and has a mixture of 60, 80 and 85 pound steel, with a gross carrying capacity of 177 thousand pounds.

This subdivision provides Canadian National Railways with a direct route from Regina through Northgate to the United States. Approximately 50 percent of the traffic on this subdivision is "bridge" traffic, originating or terminating on other lines, and in or for the United States. The Northgate crossing is Canadian National's only access to the United States, in the prairie

provinces, west of Emerson, Manitoba.

The subdivision serves 12 grain delivery points; Rowatt, Estlin, Gray, Riceton, Bechard, Lewvan, Colfax, Cedoux, Talmage, Griffin, Huntoon and Benson.

The 10 year average grain receipts for the period ending 1974-75 was 6.2 million bushels, representing 53 thousand bushels per mile of track. Non-grain and overhead traffic represents 50 percent of the total traffic volume over this line.

The Commission recommends that the Canadian National Lewvan Subdivision from Minard Junction to Regina be retained and added to the basic network, guaranteed until January 1, 2000.

Upon approval of the Regina rail relocation plan, the north end of this subdivision can be rerouted from Rowatt to connect with the CP Rail Tyvan Subdivision near Richardson for access to the Regina Canadian National yards.

CP Rail - Tyvan Subdivision

- From Stoughton to Regina, Saskatchewan - 87.2 miles

This line was constructed in 1903-04. It is laid with a mixture of 80, 85 and 100 pound steel, and has a gross carrying capacity of 220 thousand pounds.

Ten grain delivery points serve the subdivision. They are at Richardson, Kronau, Lajord, Sedley, Francis, Tyvan, Osage, Fillmore, Creelman and Heward.

The ten year average grain receipts for the period ending

1974-75 were 5.8 million bushels, representing 66 thousand bushels per mile of track. Non-grain traffic and "bridge" traffic represents a large percentage of the traffic on this line.

The Commission recommends that the Tyvan Subdivision of CP Rail from Stoughton to Regan be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Kisbey Subdivision

- From Arcola to Weyburn, Saskatchewan - 61.8 miles

This line was constructed by Canadian Pacific Railways in 1904-08. It has a mixture of 85 and 100 pound steel, with a gross carrying capacity of 220 thousand pounds.

There are five grain delivery points on the subdivision. These are at Kisbey, Forget, Stoughton, Froude and Griffin.

The 10 year average grain receipts for the period ending 1974-75 were 2.2 million bushels, representing 35 thousand bushels per mile of track.

This subdivision forms a part of a continuing secondary line through the Southern Prairies, providing a "bridge" between Southern Alberta, Southern Saskatchewan and the Lakehead.

The Commission recommends that the Kisbey subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

Canadian National - Glenavon Subdivision

- From Kipling to McCallum, Saskatchewan - 87.4 miles

This line was constructed in 1907 with 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

There are nine grain delivery points on this subdivision, Davin, Vibank, Odessa, Kendal, Montmartre, Candiack, Glenavon, Peebles and Dalzell.

The 10 year average grain receipts on the subdivision for the period ending 1974-75 are 4.4 million bushels representing 50 thousand bushels per mile of track.

This subdivision, along with the Canadian National Cromer Subdivision, forms a portion of the Canadian National Railway through line from Winnipeg to Regina.

The Commission recommends that the Canadian National Glenavon Subdivision be retained and added to the basic network guaranteed until January 1, 2000.

Canadian National - Cromer Subdivision

- From Maryfield to Kipling, Saskatchewan - 52.8 miles

This line was constructed in 1907. It is constructed with 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

There are seven delivery points on this subdivision, Kipling, Inchkeith, Langbank, Vandura, Kelso, Fairlight and Maryfield.

Average grain receipts for the 10 year period ending 1974-75

were 4.1 million bushels, equal to 77 thousand bushels per mile of track.

This subdivision, along with the Canadian National Glenavon, forms part of an east-west Canadian National Railway line between Regina and Winnipeg.

The Commission recommends that the Canadian National Cromer Subdivision be retained and added to the basic network guaranteed until January 1, 2000.

Canadian National - Corning Subdivision

- From Peebles to Handsworth, Saskatchewan - 22.3 miles

This line was constructed in 1924. It is laid with 60, 70 and 80 pound steel, and has a gross carrying capacity of 177 thousand pounds.

There are two delivery points on this subdivision. Corning is served by two elevator companies. Handsworth is served by one elevator company.

The average grain receipts for the 10 year period ending 1974-75 were 911 thousand bushels, representing 41 thousand bushels per mile of track.

The Commission recommends that:

- 1) The portion of the Corning Subdivision between Peebles and Corning be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 2) The portion of the Corning Subdivision from Corning to Handsworth be abandoned in 1978.

TABLE XI.6
Commission Recommendations For Category "B" Branch Lines
REGION 6

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977		1978	1979	1980	1981
						JUNE 30	DEC. 31				
CN GLENAVON	KIPLING	McCALLUM	87.4	87.4							
CN CROMER	MARYFIELD	KIPLING	52.8	52.8							
CN CORNING	HANDSWORTH	CORNING	7.9					7.9			
	CORNING	PEEBLES	14.4		14.4						
CN GOODWATER	RADVILLE JCT.	GOODWATER	26.8				26.8				
CN BENGOUGH	BENGOUGH JCT.	WILLOWBUNCH	71.5		71.5						
CN WEYBURN	WEYBURN	RADVILLE	25.1		25.1						
	TALMAGE	WEYBURN	12.9		12.9						
CN AVONLEA	BENGOUGH JCT.	RADVILLE	1.4		1.4						
	BENGOUGH JCT.	PARRY	28.8			28.8					
	PARRY	MOOSE JAW	58.1		58.1						
CP ASSINIBOIA	AMULET	ASSINIBOIA	64.2	64.2							
CP KISBEY	ARCOLA	WEYBURN	61.8	61.8							
CP BROMHEAD	MINTON	GLADMAR	6.4		6.4						
	TRIBUNE	SOUTHALL	7.0		7.0						
CP FIFE LAKE	BIG BEAVER	CORONACH	19.8		19.8						
CP AMULET	ORMISTON	CRANE VALLEY	6.3		6.3						
	CRANE VALLEY	CARDROSS	6.8				6.8				
CP TYVAN	STOUGHTON	REGINA	87.2		87.2						
CN LEWVAN	MINARD JCT.	REGINA	116.8	116.8							
TOTAL REGION 6			763.4	383.0	310.1	28.8	33.6	7.9			

REGION 7

LEGEND

———— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

----- To be added to the Basic Network

———— To be transferred to The Prairie Rail Authority

———— To be abandoned, 1977-1981

———— New construction

----- Transfer from CP Rail to CNR

++++++ Transfer from CNR to CP Rail



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REGION 7

Canadian National - Tonkin Subdivision

- From Wroxton to Parkerview, Saskatchewan - 63.7 miles

This line was built by the Canadian Northern Railway Company between 1908 and 1928. It is constructed with 60 pound steel and has a gross carrying capacity of 177 thousand pounds. The total subdivision extends from Russell, Manitoba. That portion from Russell to Wroxton is dealt with in Region 5.

The section of this subdivision between Wroxton and Fonehill Junction (Yorkton) has one delivery point, at Tonkin. The ten year average grain deliveries on this section of the subdivision for the period ending 1974-75 is 257 thousand bushels, equal to 10 thousand bushels per mile of track.

The section from Yorkton to Jedburgh serves two delivery points, Willowbrook and Jedburgh. The ten year average handle on this portion of the subdivision is 900 thousand bushels, equal to 34 thousand bushels per mile of track.

Elevators at Parkerview have closed. There is no traffic on this subdivision west of Jedburgh.

The Commission recommends that;

- 1) The 10.9 mile section of this subdivision between Jedburgh and Parkerview be abandoned June 30, 1977.
- 2) the 26.8 mile section of this subdivision between Fonehill Junction (Yorkton) and Wroxton be abandoned December 31st, 1977;

- 3) the 26.0 mile section of this subdivision between Yorkton and Jedburgh be abandoned in 1981.

Canadian National - Rhein Subdivision

- From Ross Junction to Wroxton, Saskatchewan - 37.8 miles

This line was constructed in 1909 to 1911. The rail is 60 pound steel. Gross carrying capacity of this line is 177 thousand pounds.

This subdivision is located east of the Yorkton Subdivision and approximately 23 miles north of the Wynard Subdivision, and serves as a link between the Tonkin Subdivision and the Margo Subdivision. The Assiniboia River and its tributary system to the east creates a natural barrier.

There are three delivery points on the subdivision, Hampton, Rhein and Stornoway. Ten elevators are operated on the line by four grain companies. One point has a population exceeding 100.

Grain traffic on the line averages 1.6 million bushels (1967-75) representing 42 thousand bushels per mile of track.

The Commission recommends that the Rhein Subdivision between Ross Junction and Wroxton be retained, and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.7

Commission Recommendations For Category "B" Branch Lines

REGION 7

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977		1978	1979	1980	1981
						JUNE 30	Dec. 31				
CN TONKIN	YORKTON	JEDBURGH	26.0								26.0
	YORKTON	WROXTON	26.8				26.8				
	JEDBURGH	PARKERVIEW	10.9			10.9					
CN RHEIN	WROXTON	ROSS JCT.	37.8		37.8						
TOTAL REGION 7			101.5		37.8	10.9	26.8				26.0

REGION 8

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - - - Transfer from CP Rail to CNR

+++++ Transfer from CNR to CP Rail



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REGION 8

CP Rail - Wishart Subdivision

- From Foam Lake to Wishart, Saskatchewan - 26.9 miles.

The line was built by the Northwestern Railway Company in the period 1927 to 1929. It was apparently constructed to cut off what is now the Canadian National Tonkin subdivision which had reached Parkerview in 1928 on its way to Watrous. The great depression intervened and construction was halted at Parkerview on the Canadian National and Wishart on the Canadian Pacific.

The rail consists of a mixture of 72 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

This subdivision serves three grain delivery points: West Bend, Bankend and Wishart.

Grain receipts in the ten crop years ending in 1974-75 averaged 1.7 million bushels per year, equal to 64 thousand bushels per mile of track.

There are ten licensed elevators on the subdivision. Nine of them are rated as being in fair condition and one of them is rated poor. The newest elevator was built in 1947, all of the others were built in the year 1928.

Wishart and West Bend have the heaviest handlings on the line with ten year average receipts (1965-75) of 846 thousand and 511 thousand bushels respectively. Bankend receipts averaged 373 thousand bushels in the same period.

The Commission recommends that the Wishart subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Melfort Subdivision

- From Lanigan to Gronlid, Saskatchewan - 101.4 miles.

The Melfort subdivision begins at Lanigan, the junction point with the Sutherland subdivision. It continues in a north easterly direction to Watson where it crosses the Canadian National Margo subdivision. It extends northward to Melfort with running rights over 1.14 miles of the Canadian National Tisdale subdivision, to gain access to Melfort. The line ends at Gronlid.

This line was constructed between the years 1920 and 1927. It is constructed with a mixture of 80 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds. There are seven bridges on the subdivision over 50 feet in length. A major structure (329 feet) over the Carrot River will need replacement soon at an estimated cost of \$108 thousand.

This subdivision serves eight grain delivery points: Sinnett, Leroy, Spalding, Naicam, Lac Vert, Melfort, Fairy Glen and Gronlid.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 4.5 million bushels per year. Average receipts are 45 thousand bushels per mile of track. In the same period receipts on the Lanigan to Lac Vert portion averaged 56.5 thousand bushels per mile of track. On the Melfort to Gronlid section receipts averaged 35 thousand bushels per mile of track. No traffic is generated between Lac Vert and Melfort.

Elevators on the line are better than average. Out of a total of 23 elevators, 15 are rated good and three are rated fair.

Melfort (CP Rail) with 1975-76 receipts of over two million bushels had the largest handling on the subdivision. Naicam and Spalding with receipts of over one million and Leroy with receipts of almost 700 thousand bushels are important grain stations. Sinnett, Lac Vert, Fairy Glen and Gronlid had receipts ranging from approximately 200 thousand to 300 thousand bushels.

Ten year average receipts at Melfort on both Canadian National and CP Rail delivery points of just over one million bushels, compared with receipts of 3.15 million bushels in 1975-76 indicates the increasing importance of Melfort as a grain assembly point.

Saskatchewan Wheat Pool operate two elevators at Fairy Glen and two at Gronlid. One of the plants at Gronlid was built in 1949 and is in good condition. No plans exist for renovation or rebuilding any of the elevators on the Melfort to Gronlid section of the subdivision.

Alternate delivery points for producers on the Melfort to Gronlid portion of the line exist at Melfort, or Brooksby and Ridgedale on the Canadian National Brooksby subdivision. If rail service was discontinued on this section, the estimated average increase in hauling distance for producers would be 9.9 miles.

The Commission recommends that:

- 1) the 55.2 miles between Lanigan and Lac Vert
be retained and placed under the jurisdiction
of the Prairie Rail Authority;

- 2) the 19.1 miles between Melfort and Gronlid be abandoned in 1980; except that portion of track now serving the elevators at Melfort which is to be retained. Railway service from Melfort to Gronlid, until abandonment, to be provided by Canadian National. After abandonment of the Melfort to Gronlid section, rail service to the elevators now located on the CP Rail track be provided by Canadian National; and,
- 3) the 27.1 miles between Lac Vert and Melfort be abandoned on June 30, 1977.

The Commission has recommended that the grain elevator company at Gronlid, and the Prairie Rail Authority, give priority to the establishment of an off-line elevator at the point. See page 144 of Chapter 5.

Canadian National - St. Brieux Subdivision

- From Thatch to Humboldt Junction, Saskatchewan - 52.2 miles

The line was constructed between the years 1912 and 1920. The rail consists of a mixture of 60 and 80 pound steel with a gross carrying capacity of 177 thousand pounds.

This subdivision serves six grain delivery points: Lipsett, Pathlow, St. Brieux, Daylesford, Lake Lenore and Moseley. It also serves Canadian National's gravel pit near St. Brieux, out of which 1,627 carloads of pit run gravel and crushed rock ballast were shipped in 1975.

Grain receipts in the ten crop years ending in 1974-75 averaged 3.1 million bushels per year, equal to 59 thousand bushels per mile of track.

There are 17 operating elevators on the subdivision. Of these six are rated as being in good condition, six are fair and five are in poor condition. These elevators were constructed in the period from 1921 to 1957. Many of them will require upgrading if they are to remain in service.

Lake Lenore with 1975-76 receipts of over one million bushels and St. Brieux with 780 thousand bushels had the largest handlings on the subdivision. Moseley, Pathlow and Lipsett had receipts ranging from 257 thousand to 396 thousand bushels.

Continental grain operate two elevators at Daylesford which had been closed by the original owners. These elevators can be described as specialty elevators since they handled 348 thousand bushels of rapeseed out of a total handling of 402 thousand bushels.

The Commission recommends that the St. Brieux subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

Canadian National - Meskanaw Subdivision

- From Meskanaw Junction to Lannaw Junction, Saskatchewan - 89.1 miles.

The line was constructed between the years 1912 and 1929. The rail used at the time of construction is a mixture of 80 and 85 pound steel. Gross carrying capacity on the line is 220 thousand pounds.

A railliner operates over this subdivision and provides passenger service three days a week between Saskatoon, Saskatchewan and The Pas, Manitoba. If passenger service is to be maintained between Saskatoon and The Pas, it could operate over the Aberdeen and St. Brieux subdivisions if any of the Meskanaw Subdivision is abandoned.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.6 million bushels per year, giving a traffic density of only 18.5 thousand bushels per mile of track.

This subdivision is a prime example of the effects of elevator rationalization. Originally, there were ten stations with operating elevators on the line. Currently, there are four delivery points at Alvena, Yellow Creek, Meskanaw and Ethelton.

There are 11 operating elevators on the line. Only two are rated as being in good condition, one at Alvena and one at Yellow Creek.

Alvena with grain receipts of 470 thousand bushels had the largest handling on the subdivision. The future of Yellow Creek, Meskanaw and Ethelton (with 1975-76 receipts of 382 thousand bushels, 331 thousand bushels and 369 thousand bushels) as parts of the permanent grain handling system is doubtful.

Considering the poor condition of the elevators on the line and the low receipts, it would not appear prudent to inject capital for rail rehabilitation. The railway estimated cost of rehabilitation of the **subdivision** using the old rail was \$6.5 million.

Alternate delivery points within reasonable distances for most producers (8 to 17 miles) exist on the Canadian National Aberdeen, Cudworth, St. Brieux and Tisdale subdivisions and on the CP Rail Prince Albert Subdivision.

A new highway paralleling the railroad is being constructed between Alvena and Wakaw. It is expected that this highway will eventually extend to Melfort, serving the communities of Yellow Creek, Meskanaw and Ethelton.

The Commission recommends that:

- 1) the 1.9 miles from Meskanaw Junction to Thatch be retained and placed in the basic network, guaranteed until January 1, 2000,
- 2) the 26.8 miles from Thatch to Yellow Creek be abandoned in 1980,
- 3) the 26.8 miles from Yellow Creek to Wakaw be abandoned on December 31, 1977,
- 4) the 15.1 miles from Wakaw to Alvena be abandoned in 1980, and
- 5) the 18.5 miles from Alvena to Lannaw Junction be abandoned on June 30, 1977.

Canadian National - Cudworth Subdivision

- From Rutan to Cudworth Junction, Saskatchewan - 90.6 miles.

This subdivision was built in the years between 1910 and 1917. It is constructed with a mixture of 60, 65, 79 and .1 mile of 85 pound rail, that is in poor condition. Gross carrying capacity is limited to 177 thousand pounds.

This subdivision serves nine delivery points: Meacham, Peterson, Bremen, Cudworth, Wakaw, Domremy, Hoey, St. Louis and Red Deer Hill.

Grain receipts on the line averaged 4.3 million bushels per year, in the ten year period ending 1974-75. Average receipts equal 48 thousand bushels per mile of track. On 62.3 miles between Meacham and St. Louis receipts averaged 67 thousand bushels per mile of track. On 21.6 miles between St. Louis and Cudworth Junction receipts averaged seven thousand bushels per mile of track. No traffic is generated between Rutan and Meacham.

Four companies operate 25 elevators on the subdivision. Of these, seven are rated as being in good condition, seven are fair, while 11 are in poor condition.

The Commission recommends that:

- 1) the 62.3 miles between Meacham and St. Louis be retained and placed under the jurisdiction of the Prairie Rail Authority,
- 2) the 6.7 miles of the Cudworth subdivision between Rutan and Meacham be abandoned on June 30, 1977, and
- 3) the 21.6 miles of the Cudworth subdivision between St. Louis and Cudworth Junction be abandoned on December 31, 1977.

TABLE XI.8
Commission Recommendations For Category "B" Branch Lines
REGION 8

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 DEC. 31		1978	1979	1980	1981
CP WISHART	FOAM LAKE	WISHART	26.9	52.2	26.9	6.7	21.6			15.1	
CN St. BRIEUX	HUMBOLDT	THATCH	52.2								
CN CUDWORTH	RUTAN	MEACHAM	6.7								
	MEACHAM	ST. LOUIS	62.3		62.3						
	ST. LOUIS	CUDWORTH JCT.	21.6								
CN MESKANAW	WAKAW	ALVENA	15.1	1.9		18.5	26.8			26.8	
	ABERDEEN	ALVENA	18.5								
	MESKANAW JCT.	THATCH	1.9								
	THATCH	YELLOW CREEK	26.8								
	WAKAW	YELLOW CREEK	26.8								
CP MELFORT	LANIGAN	LAC VERT	55.2		55.2						
	LAC VERT	MELFORT	27.1			27.1					
	MELFORT	GRONLID	19.1							19.1	
TOTAL REGION 8			360.2	54.1	144.4	52.3	48.4			61.0	

REGION 9

LEGEND

———— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

----- To be added to the Basic Network

———— To be transferred to The Prairie Rail Authority

———— To be abandoned, 1977-1981

———— New construction

----- Transfer from CP Rail to CNR

++++ Transfer from CNR to CP Rail

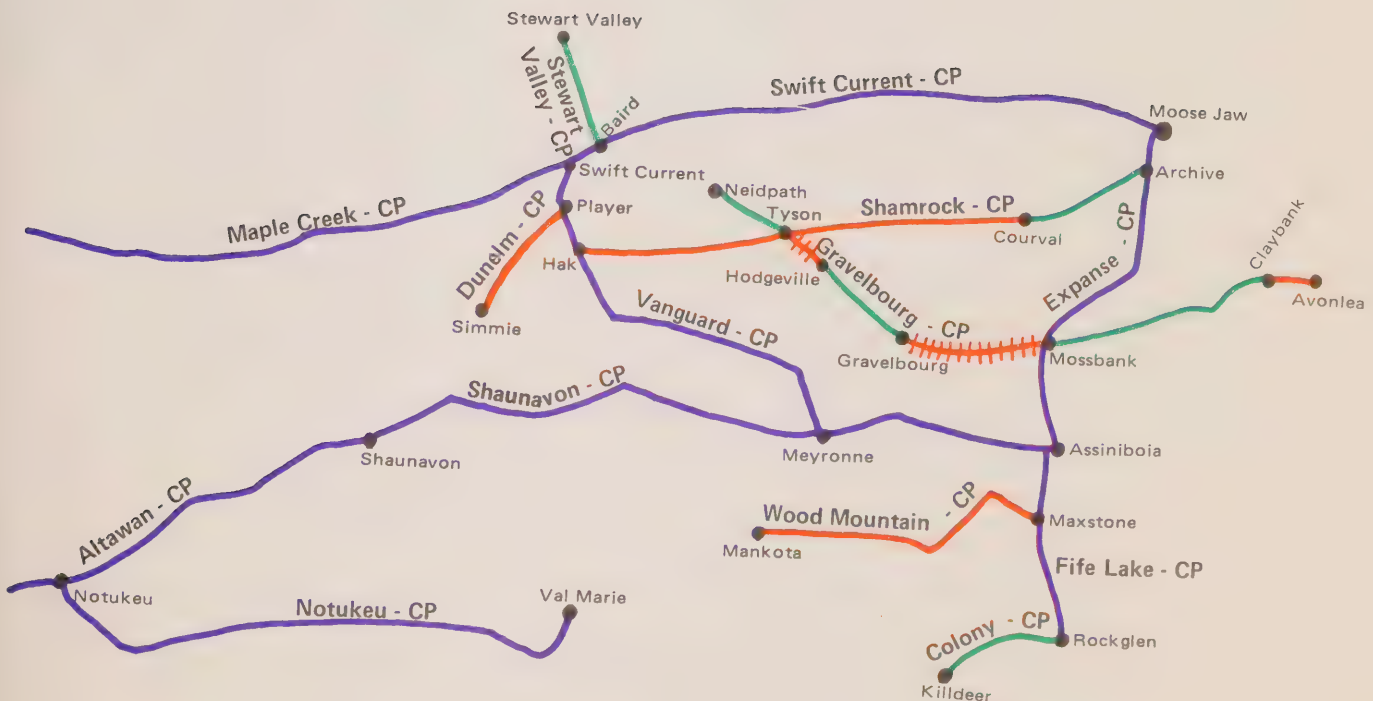


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REGION 9

CP Rail Colony Subdivision

- From Rockglen to Killdeer, Saskatchewan - 25.0 miles

This line was constructed in 1931. It is laid with 73, 80 and 85 pound steel, and has a gross carrying capacity of 220 thousand pounds.

There are two grain delivery points on this subdivision, Killdeer and Canopus.

Average grain receipts on this subdivision for the ten year period ending 1974-75 were 449 thousand bushels, representing 18 thousand bushels per mile of track. This line serves a grain and livestock producing area that is bordered on the south by the United States boundary. Barriers to easy access are created by the drainage valleys of the West Poplar and East Poplar rivers, numerous benches, depressions and the divide to the north of the line.

Alternate delivery points are on the CP Rail Wood Mountain and Fife Lake Subdivisions will result in truck hauls of up to 40 miles when this line is abandoned.

There are large reserves of lignite coal in the area traversed by this subdivision. Helium resources, high grade pottery clay deposits are also located adjacent to this line. In view of the possibility of the development of these resources, the Commission recommends that the Colony Subdivision between

Rockglen and Killdeer not be abandoned before 1981, and that it be placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Wood Mountain Subdivision

- From Ogle to Mankota, Saskatchewan - 64.9 miles

This line was constructed by the Canadian Pacific Railway in 1929. It is constructed with a mixture of 70, 72, 80 and 85 pound steel, and has a gross carrying capacity of 220 thousand pounds.

There are eight grain delivery points on this subdivision, Stonehenge, Flintoft, Wood Mountain, Fir Mountain, Glentworth, McCord, Ferland and Mankota. This has been an important line for non-grain commodities. In 1974 there were 194 cars of cattle, 136 cars of clay and 34 cars of other items shipped off the line.

Grain receipts for the ten year period ending 1974-75 averaged 3.6 million bushels per year. This equals 55 thousand bushels per mile of track.

The Commission recommends that the CP Rail Wood Mountain Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Gravelbourg Subdivision

- From Gravelbourg Junction to Neidpath, Saskatchewan - 118.9 miles.

This line was constructed between 1912 and 1924. It is constructed with 56, 60 and 85 pound steel, and has a gross

carrying capacity of 177 thousand pounds.

There are two delivery points on the Avonlea to Mossbank portion of this subdivision, Spring Valley and Mitchellton. Grain receipts on this portion of the subdivision averaged 406 thousand bushels per year in the 10 year period ending 1974-75, equal to eight thousand bushels per mile of track. Alternate delivery points are at Avonlea, Tilney, Briercrest, Crane Valley and Ormiston. Additional hauling distances of 9.7 and 11.2 miles will be experienced following abandonment.

There are three delivery points on the Mossbank to Gravelbourg portion of the subdivision. They are Mazenod, Palmer and Gravelbourg. Grain receipts in the 10 year period ending 1974-75 were 2.7 million bushels per year equal to 88 thousand bushels per mile of track.

On the Gravelbourg to Hodgeville portion of this subdivision there is one delivery point at Bateman. Ten year average grain receipts at Bateman totalled 458 thousand bushels, equal to 18 thousand bushels per mile of track.

On the Hodgeville to Tyson portion of the subdivision, there is one delivery point at Hodgeville. Grain receipts at Hodgeville in the 10 year period ending 1974-75 totalled 640 thousand bushels per year, equal to 145 thousand bushels per mile of track.

Neidpath is the only delivery point on the portion of this subdivision between Tyson and Neidpath. Grain receipts on this portion of the line in the 10 year period ending 1974-75 averaged 415 thousand bushels per year. Receipts are equal to 40 thousand

bushels per mile of track.

Additional trucking distances of approximately five miles will be incurred following abandonment of the Tyson-Neidpath section and Gravelbourg-Hodgeville sections as producers truck to delivery points on the CP Rail Swift Current, Shamrock and Gravelbourg subdivisions.

The Commission recommends that the portion of the line

- 1) from Avonlea to Claybank be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) from Claybank to Mossbank be abandoned, December 31, 1977;
- 3) from Mossbank to Gravelbourg be transferred to CP Rail, retained and placed under the jurisdiction of the Prairie Rail Authority;
- 4) from Gravelbourg to Hodgeville abandoned in 1979;
- 5) from Hodgeville to Tyson be transferred to CP Rail retained and placed under the jurisdiction of the Prairie Rail Authority;
- 6) from Tyson to Neidpath be abandoned December 31, 1977.

CP Rail - Shamrock Subdivision

- From Archive to Hak, Saskatchewan - 103.0 miles

The Shamrock Subdivision was constructed by the Canadian Pacific Railway during the period 1924-30. The line has 65,72,

73, 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

Seven grain delivery points are served by this subdivision. These are, Courval, Coderre, Shamrock, Kelstern, Vogel, Hallonquist and McMahon. There are no grain delivery points between Courval and Archive.

Ten year average grain receipts for the period ending 1974-75 were 3.1 million bushels per year. This is equivalent to 30 thousand bushels per mile of track. During 1974 there were 2,244 carloads of crushed stone and gravel which originated at the Redi-Mix spur at Old Wives.

The Commission recommends that:

- 1) The portion of the Shamrock Subdivision between Courval and Hak be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 2) The portion of the Shamrock Subdivision between Courval and Archive be abandoned December 31, 1977.

CP Rail - Dunelm Subdivision

- From Player to Simmie, Saskatchewan - 25.2 miles

The line was constructed by Canadian Pacific Railway in 1932. It has 65, 80 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

Three delivery points, Simmie, Vesper and Duncairn are served by this subdivision.

The ten year average grain receipts for the period ending 1974-75 are 1.1 million bushels per year, equal to 44 thousand bushels per mile of track. The line serves a large area bordered by the CP Rail Maple Creek Subdivision on the north, CP Rail Shaunavon Subdivision to the east and the Vanguard Subdivision to the east. Lateral barriers are formed by the Duncairn Dam, Reid Lake, Swift Current River inhibit easy access to alternate lines.

The Commission recommends that the Dunelm Subdivision of CP Rail from Player to Simmie be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Stewart Valley Subdivision

- From Baird to Stewart Valley, Saskatchewan - 20.4 miles

This line was constructed by the Canadian Pacific Railway in 1929. It is laid with 80 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

There are two grain delivery points, Stewart Valley and Leinan.

Ten year average grain receipts for the period ending 1974-75 were 819 thousand bushels per year, equivalent to 40 thousand bushels per mile of track.

The grain companies have no plans to rebuild or renovate

plants on this line. Alternate delivery points are on the CP Rail Swift Current Subdivision and the Empress Subdivision. Average additional grain hauling distances to these lines has been calculated at 10.4 and 15.1 miles, when the rail service is discontinued. Stewart Valley is located on Number 4 highway, a paved road, directly north of Swift Current.

The Commission recommends that the Stewart Valley Subdivision between Baird and Stewart Valley be abandoned December 31, 1977.

The Commission has recommended that the elevator companies at Stewart Valley, and the Prairie Rail Authority, give priority to the establishment of an off-line elevator at the point. See page 144, chapter 5.

TABLE XI.9
Commission Recommendations For Category "B" Branch Lines
REGION 9

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977		1978	1979	1980	1981
						JUNE 30	DEC. 31				
CP COLONY	ROCKGLEN	KILLDEER	25.0								25.0(2)
CP WOOD MOUNTAIN	MAXSTONE	MANKOTA	64.9		64.9						
CH GRAVELBOURG	AVONLEA	CLAYBANK	7.3		7.3						
	CLAYBANK	MOSSBANK	40.9				40.9				
	MOSSBANK	GRAVELBOURG	30.3		30.3(1)						
	GRAVELBOURG	HODGEVILLE	25.5						25.5		
	HODGEVILLE	TYSON	4.4		4.4(1)						
	TYSON	HEIDPATH	10.5				10.5				
CP SHAMROCK	COURVAL	HAK	70.0		70.0						
	ARCHIVE	COURVAL	33.0				33.0				
CP STEWART VALLEY	BAIRD	STEWART VALLEY	20.4				20.4				
CP DUNELM	PLAYER	SIMMIE	25.2		25.2						
TOTAL REGION 9			357.4		202.1		104.8		25.5		25.0

(1) To Be Transferred to CP Rail.
(2) RETAIN UNTIL 1981, WHEN COAL, CLAY AND HELIUM POTENTIAL WILL BE REVIEWED.

REGION 10

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network
- To be transferred to The Prairie Rail Authority
- To be abandoned, 1977-1981
- New construction
- - - Transfer from CP Rail to CNR
- ++++ Transfer from CNR to CP Rail

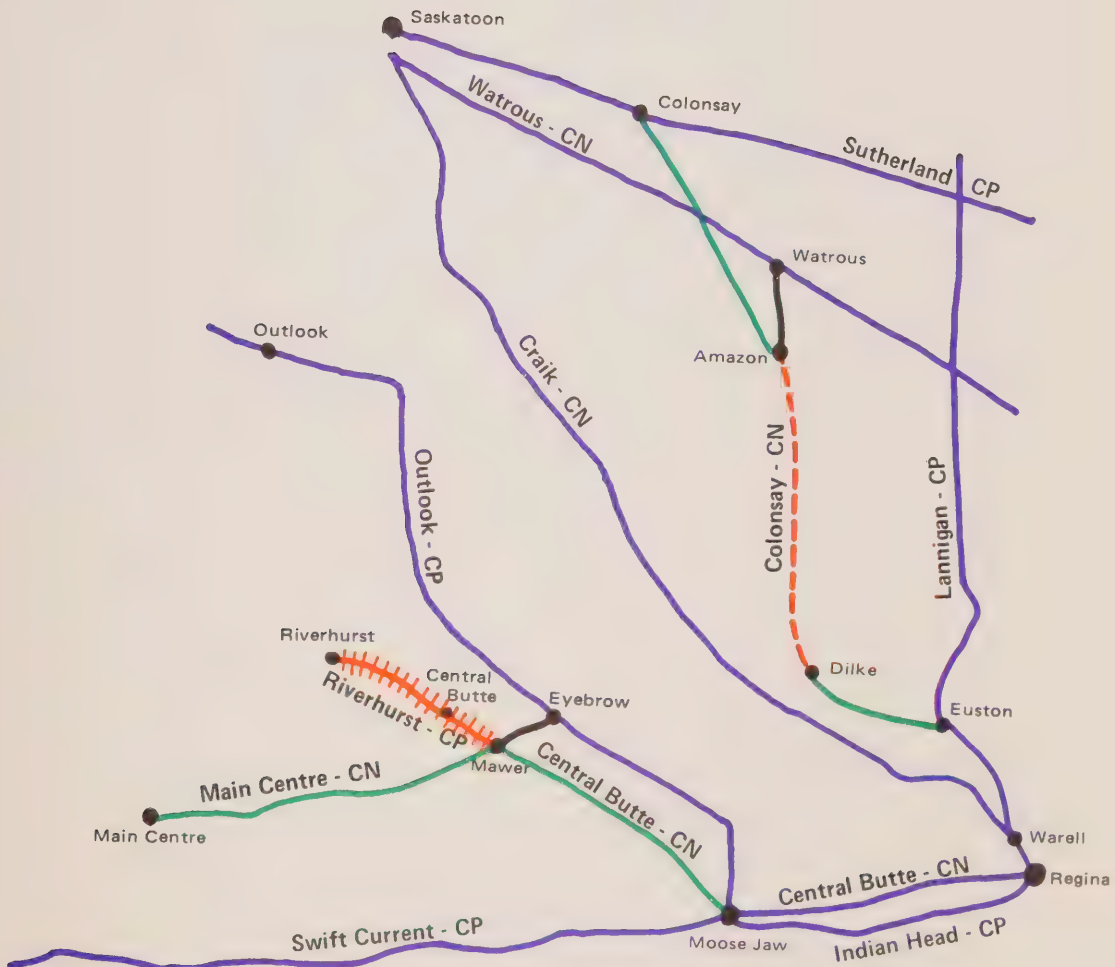


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REGION 10

CP Rail - Colonsay Subdivision

- From Euston Junction to Colonsay, Saskatchewan - 108.5 miles.

This line was built in 1911. It is constructed of 65 and 85 pound steel and has a gross carrying capacity of 220 thousand pounds.

The south end of the subdivision is in deplorable condition. A 3,020 foot causeway between mile 0.7 and 1.3 over Last Mountain Lake was washed out in the spring of 1974, and remains out to this day. There are also three bridges at mile 0.7, mile 10.0 and mile 12.5 which are either eroded or washed out. This is not the first time these structures have been washed out. Any attempt to rebuild this trackage in its present location would be a complete waste of money, as it would only be washed out again by high water levels and winds on Last Mountain Lake. At a hearing in Regina on October 20, 1975, CP Rail estimated it would cost in the neighbourhood of five to six million dollars to restore the south end of this line and to rebuild the causeway.

There are eight delivery points on the Colonsay Subdivision, Dilke, Holdfast, Penzance, Liberty, Stalwart, Imperial, Simpson and Amazon.

CP Rail has, since the wash-out, operated this line from the north end of Colonsay. There are no delivery points on this line between Colonsay and Amazon, meaning trains deadhead 33 miles before beginning to pick up or drop cars.

This subdivision crosses the Canadian National main line west of Young. CP Rail are required to maintain a "Diamond" at that crossing. Maintenance of the Diamond costs approximately nine thousand dollars per year, including removal of the diamond each winter and replacement in the spring, as the line is out of operation from mid-December to mid-April.

The Commission examined a variety of options for this line. This is a heavy grain line with receipts of 5.1 million bushels per year. This line is required for grain service. Alternate trucking distances of up to 35 miles are unreasonable. Construction of an eight mile link between Amazon and Young is the most logical solution to provide this service. The line will be shortened from 108.5 miles to 59.4 miles. The terrain between Amazon and Watrous is flat with no physical barriers. It will be operated by the Canadian National Railways out of Watrous.

The Commission recommends:

- 1) that the 51.4 mile section between Amazon and Dilke be retained and placed under the jurisdiction of the Prairie Rail Authority.
- 2) that a new 8.0 mile link be constructed between Amazon and Watrous, and the 33.3 miles between Amazon and Colonsay be abandoned in 1978.
- 3) That the Colonsay Subdivision between Dilke and Watrous be transferred to Canadian National Railways.
- 4) that the 21.8 mile section between Euston and Dilke be abandoned June 30, 1977.

Canadian National Railways - Main Centre Subdivision

- From Mawer to Main Centre, Saskatchewan - 48.6 miles

This line was constructed in 1929 and 1930 with 60 pound steel and has a gross carrying capacity of 177 thousand pounds.

There are five grain delivery points on the subdivision, Main Centre, Gouldtown, Calderbank, Halvorgate and Thunder Creek.

The ten year average grain receipts for the period ending 1974-75 were 1.0 million bushels per year, average receipts equal 21 thousand bushels per mile of track.

Gouldtown, Calderbank, Halvorgate and Thunder Creek are all low volume delivery points, having average receipts of below 200 thousand bushels. Alternate delivery points are on the Swift Current Subdivision of CP Rail, and the retained portion of the Central Butte Subdivision. Abandonment will create additional hauling distances of between 8.8 and 10.4 miles.

The Commission recommends that the Main Centre Subdivision be abandoned in 1979.

The Commission has recommended that the elevator companies at Main Centre and the Prairie Rail Authority give priority to the establishment of an off-line elevator at the point. See page 144, Chapter 5.

Canadian National - Central Butte Subdivision

- From Moose Jaw Junction to Central Butte, Saskatchewan - 53.3 miles.

This line was constructed in 1913. It has a mixture of 60 and 85 pound steel and has a gross carrying capacity of 177 thousand pounds.

There are six delivery points on the subdivision, Central Butte, Mawer, Darmody, Lake Valley, Rowletta and Grayburn.

The ten year average receipts for the period ending 1974-75 were 1.7 million bushels per year. Average annual receipts equal 31 thousand bushels per mile of track.

The four delivery points between Mawer and Moose Jaw are all low volume points. The ten year average handle at Lake Valley and Rowletta is below 200 thousand bushels. Darmody and Grayburn has an average handle of 217 thousand bushels and 214 thousand respectively. The 45.9 miles of line between Moose Jaw and Mawer has receipts equal to only 18 thousand bushels per mile of track. Good roads exist to alternate delivery points, and trucking distances are reasonable.

The Commission recommends that;

- 1) an 11.0 mile link be constructed between Mawer and Eyebrow on the Outlook Subdivision of CP Rail;
- 2) the 7.4 mile section between Mawer and Central Butte be retained, transferred to CP Rail, and placed under the jurisdiction of the Prairie Rail Authority.
- 3) the 45.9 miles between Moose Jaw and Mawer be abandoned in 1979, following construction of the link.

Canadian National - Riverhurst Subdivision

- From Central Butte to Riverhurst, Saskatchewan - 18.0 miles

This line was constructed between 1914 and 1916 with 60 pound steel and has a gross carrying capacity of 177 thousand pounds.

There are two delivery points, Riverhurst and Lawson.

The ten year average grain receipts for the period ending 1974-75 were 967 thousand bushels, representing 54 thousand bushels per mile of track.

The Commission recommends that the line between Central Butte and Riverhurst be retained, transferred to CP Rail and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.10
Commission Recommendations For Category "B" Branch Lines
REGION 10

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30	DEC. 31	1978	1979	1980	1981
CN CENTRAL BUTTE	MOOSE JAW	MAWER	45.9						45.9		
	MAWER	CENTRAL BUTTE	7.4		7.4(1)						
	MAWER	EYEBROW (CP)			11.0(1)						
CN RIVERHURST	CENTRAL BUTTE	RIVERHURST	18.0		18.0(1)						
CN MAIN CENTRE	MAWER	MAIN CENTRE	48.6						48.6		
CP COLONSAY	EUSTON	DILKE	21.8			21.8					
	DILKE	AMAZON	51.4		51.4(2)						
	AMAZON	WATROUS			8.0(2)						
	AMAZON	COLONSAY	33.3					33.3			
TOTAL REGION 10			226.4		95.8	21.8		33.3	94.5		




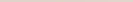
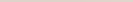
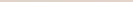
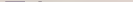
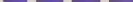
(1) TRANSFER TO CP RAIL FOLLOWING CONSTRUCTION OF LINK - MAWER TO EYEBROW (11.0 MILES).
(2) TRANSFER TO CNR FOLLOWING CONSTRUCTION OF LINK - AMAZON TO WATROUS (8.0 MILES).

REGION 11

LEGEND

Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- | | | |
|---|---|---|
|  | To be added to the Basic Network |  Government of Canada
 Hall Commission |
|  | To be transferred to The Prairie Rail Authority | |
|  | To be abandoned, 1977-1981 | |
|  | New construction | |
|  | Transfer from CP Rail to CNR | |
|  | Transfer from CNR to CP Rail | |



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REGION 11

Canadian National - Conquest Subdivision

- From Conrose Junction to Beechy, Saskatchewan - 94.3 miles.

The line was constructed in the period 1911 to 1921. The 60 pound rail is in fair condition. The gross carrying capacity is limited to 177 thousand pounds.

This subdivision serves ten grain delivery points: Donavon, Ardath, Benny, Macrorie, Dunblane, Birsay, Tullis, Lucky Lake, Demaine, Beechy and a railway gravel pit at Dunblane.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged five million bushels per year, equal to 53 thousand bushels per mile of track.

Saskatchewan Wheat Pool operate 19 elevators on the subdivision. Of these, seven are rated as being in good condition, three are fair while nine are classified as poor. Pioneer Grain operate one elevator at Beechy and two at Dunblane. A major overhaul is in progress at the Beechy plant. Their Dunblane elevator is rated good. United Grain Growers operate two elevators at Beechy and one at Lucky Lake. One of their plants at Beechy is rated good. The number two plant is rated fair. The company plans to build an annex at Beechy and a new scale and driveway at Lucky Lake.

Gardiner Dam on the South Saskatchewan River created Lake Diefenbaker which is a formidable barrier to the east and south of the subdivision. The Coteau Lake chain, between Macrorie and Dinsmore permits only five road crossings and thus prevents easy road access north or south in this area.

Some producers in the area are already hauling 20 to 25 miles. If the line was discontinued the average estimated increase in hauling distance would be 13.8 miles.

Retention of the northern part of the subdivision from Conquest to Delisle cannot be justified by the grain traffic generated on it, but because it is an essential link to the Canadian National Rosetown subdivision.

The Commission recommends that the Conquest subdivision be retained and placed in the basic network, guaranteed until January 1st, 2000.

Canadian National - Elrose Subdivision

- From Conquest Junction to Glidden, Saskatchewan - 120.6 miles.

The line was constructed in the period 1912 to 1928 and is in fair physical condition. The condition of the rail varies from poor to good. From Mile 0 to Mile 101 the weight of the rail is 60 pounds per yard, the remainder to Mile 120 is either 80 or 85 pounds. Gross carrying capacity is limited to 177 thousand pounds.

The subdivision serves 12 grain delivery points: Dinsmore, Wiseton, Forgan, Hughton, Elrose, Wartime, Plato, Richlea, Eston, Snipe Lake, Madison and Glidden.

There are four communities on the line with 1971 populations over 150: Dinsmore (421), Wiseton (180), Elrose (573) and Eston (1,418).

This subdivision serves a highly productive area. Uncultivated acreage is low at nine percent of the total acreage. Average seeded

acreage (including summerfallow) per wheat board permit book is high at 855 acres (1975-76). Elevator deliveries are also high, averaging close to 13 thousand bushels per permit book (1975-76). Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 9.1 million bushels per year, or 76 thousand bushels per mile of track.

Elevator facilities on the line are generally fair to good. Out of 48 elevators, 17 are good and 14 are rated as being in fair condition. There are no operating elevators on the section of the line from Glidden to Kindersley.

The Commission recommends that:

- 1) the 104.3 miles between Conquest Junction and Glidden be retained and placed in the basic network, guaranteed until January 1st, 2000; and
- 2) the 16.3 miles between Glidden and Elrose Junction be abandoned on June 30, 1977.

Canadian National - Mantario Subdivision

- From Glidden to Alsask, Saskatchewan - 43.8 miles.

The line was constructed between the years 1918 and 1920. The 80 pound steel used at the time of construction is in fair condition. Gross carrying capacity is limited to 177 thousand pounds.

Grain traffic of 1,858 carloads in 1974 amounted to 82 percent of the total traffic. Sodium sulphate shipments amounted to 394 carloads (17 percent). Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 2.9 million bushels per year, the equivalent of 66 thousand bushels per mile of track.

The subdivision serves three grain delivery points: Eatonia, Laporte and Mantario.

Elevator facilities on the line are good with eight plants out of a total of 13 rated as being in good condition.

The Commission recommends that the Mantario subdivision be retained and placed in the basic network, guaranteed until January 1, 2000.

Canadian National - Acadia Valley Subdivision

- From Eyre Junction, Saskatchewan, the junction with the Mantario subdivision, to Acadia Valley, Alberta - 24.3 miles.

This line was constructed during the years 1921 to 1926. The rail is 85 pound steel with a gross carrying capacity of 177 thousand pounds.

Acadia Valley is the only grain delivery point on the line. Alberta Wheat Pool and Pioneer Grain Company are represented at this point. The three elevators were built in 1928, 1948 and 1968, the two latter are in good condition.

Grain receipts on this subdivision have averaged 880 thousand bushels per year in the ten year period ending 1974-75. Average receipts equal 36 thousand bushels per mile of track. Receipts in 1975-76 at Acadia Valley were 1.3 million bushels.

Alternate facilities are available at Oyen, a distance of 21 miles and Empress, a distance of 25 miles.

Proposed road construction west of Acadia Valley will divert some additional grain from Oyen to Acadia Valley, increasing the volume.

The Commission recommends that the Acadia Valley subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - McMorran Subdivision

- From Milden to McMorran, Saskatchewan - 60.5 miles.

The line was constructed between 1919 and 1923. It is in fair physical condition. The rail is a mixture of 80 and 85 pound per yard steel and was installed in a partly worn condition at the time of construction. Gross carrying capacity is limited to 220 thousand pounds.

With the recent closure of the elevator at Thrasher the subdivision serves the following points: Glamis, Gunnworth, Bickleigh, Totnes and McMorran.

Saskatchewan Wheat Pool, Pioneer Grain and United Grain Growers operate nine elevators at five stations. Company ratings as to the physical condition of their plants is as follows: four fair and five poor. These facilities were built during the early twenties. Estimated service life ranges from five to ten years. No company has any plans for new plants or major renovations to existing plants.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.4 million bushels per year or 24 thousand bushels per mile of track. Handlings are low at all stations ranging from a low of 86 thousand bushels at Thrasher to a high of 313 thousand bushels at Glamis in the crop year 1975-76.

Alternate delivery points exist at Rosetown, Fiske, Darcy and Brock, 9 to 14 miles north on the Canadian National Rosetown subdivision.

Milden and Sovereign on the CP Rail Kerrobert subdivision would be convenient delivery points for producers on the east end of the McMorran subdivision. Elevators at Dinsmore, Wiseton, Forgan, Hughton, Elrose, Plato, Richlea and Eston, 7 to 11 miles south on the Canadian National Elrose subdivision could serve producers south of the line if the McMorran subdivision was abandoned.

The Commission recommends that:

- 1) the 30.0 miles between Gunnworth and McMorran be abandoned on December 31, 1977; and
- 2) the 30.5 miles between Milden and Gunnworth be abandoned on December 31, 1977 or sooner, following construction of a connection at Wartime on the Canadian National Elrose subdivision to connect with the Wartime to Kyle section of the Matador subdivision.

CP Rail - Matador Subdivision

- From Gunnworth to Matador, Saskatchewan - 43.0 miles.

The line was constructed between 1919 and 1923 and originally began at Rosetown. The section between Rosetown and Gunnworth was abandoned in 1962. The rail is 72 pounds per yard, rolled in 1893 and was partly worn when installed. Gross carrying capacity is limited to 220 thousand pounds.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged two million bushels per year, or 48 thousand bushels per mile of track.

The subdivision now serves five grain delivery points: Mondou, Sanctuary, Tuberose, Kyle and Matador.

Kyle is the largest community on the line with a 1971 population of 509.

Saskatchewan Wheat Pool operate 11 elevators at five stations. Two of them are rated as being in good condition while nine are in poor condition. Pioneer Grain operate elevators at three stations. Their rating on physical condition is two fair and one poor.

The Commission recommends that:

- 1) the 30.4 miles between Wartime and Kyle be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) a connection be constructed at Wartime to connect the Canadian National Elrose subdivision to the Matador subdivision;
- 3) operation of the Matador subdivision be transferred to Canadian National Railway;
- 4) the 7.5 miles between Gunnworth and Wartime be abandoned December 31, 1977 or sooner, if the connection at Wartime is completed before that date; and
- 5) the 5.1 miles between Kyle and Matador be abandoned on December 31, 1977.

Canadian National - White Bear Subdivision

- From Eston to White Bear, Saskatchewan - 34.3 miles.

The line was constructed in 1925. The 60 pound rail is in poor condition with a gross carrying capacity of 177 thousand pounds.

There are seven trestles in 10.1 miles between Lacadena and White Bear. The following table gives the location and description of them:

	<u>Location</u>	<u>No. of Bents</u>	<u>Length in Feet</u>	<u>Height in Feet</u>
Mile	27.5	7	83	12
	28.8	8	98	24
	29.9	25	341	51
	30.9	18	236	63
	31.1	18	247	60
	32.6	18	247	41
	33.9	21	256	58

These structures have given Canadian National problems. Soil instability with shifting of the supporting piles has made it necessary in some cases to drive additional piles to properly support the trestles. Canadian National have stated that the trestles on this subdivision will require rebuilding, or replacement with earth fill and culverts before 1983, probably starting in 1977 at an estimated cost of five million dollars.

The subdivision serves four grain delivery points:
Isham, Tyner, Lacadena and White Bear.

Saskatchewan Wheat Pool operate six elevators at four stations, White Bear, Lacadena, Tyner and Isham, all of which are designated as

secondary stations. The company rates their physical condition as one fair and five poor. Pioneer Grain Company operate six elevators at the same stations and rate their facilities as four fair to poor, one fair to good and one fair.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 2.2 million bushels per year, or 64 thousand bushels per mile of track.

The South Saskatchewan River, 10 to 15 miles south of the subdivision, prevents road access to the south. A ferry at Lancer, 17 miles southwest of Eston, is the first available crossing over the river, west of the bridge at Saskatchewan Landing on Highway 4.

The Commission recommends that:

- 1) the 24.2 miles between Eston and Lacadena be retained and placed under the jurisdiction of the Prairie Rail Authority; and
- 2) the 10.1 miles between Lacadena and White Bear be abandoned in 1979.

CP Rail - Asquith Subdivision

- From Urban to Baljennie, Saskatchewan - 43.8 miles.

Sections of the line were constructed and placed in operation at various times from 1909 to 1931. The rail is a mixture of 54, 72, 73, 80 and 85 pound steel, partly worn when installed at the time of construction. Gross carrying capacity is limited to 220 thousand pounds.

This subdivision serves three grain delivery points: Arelee, Struan and Sonningdale.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.1 million bushels per year, equal to 25 thousand bushels per mile of track. No traffic is generated between Sonningdale and Baljennie.

There are seven licensed elevators on the subdivision. These elevators were constructed in the period from 1926 to 1931. Five of them are rated as being in fair condition. Two of them are rated as being in poor condition. None of the companies have any plans for new construction or renovations to their plants at any station.

Ten year average (1965-75) receipts at Arelee, Struan and Sonningdale were 477 thousand bushels, 341 thousand bushels and 318 thousand bushels.

United Grain Growers and Saskatchewan Wheat Pool share the market at Arelee. United Grain Growers operate two elevators at Struan. Saskatchewan Wheat Pool operate two elevators at Sonningdale.

Low levels of receipts at all stations will probably make replacement of elevator facilities impossible when present facilities are worn out. Possibly one or two good elevators at Arelee or Struan could provide better service for producers in the area than the seven present ones at three stations.

Alternative elevators exist at Maymont, 13 miles north of Sonningdale; Asquith, Kinley, Leney and Perdue, 12 to 18 miles from Arelee could serve the producers at the south end of the line if rail service

was discontinued. Estimated average additional hauling distance in the event of rail line abandonment is 9.2 miles.

Roads in the area are generally good.

Some grain from this subdivision is now being trucked to Saskatoon. Requirements for the flour mills and rapeseed plant in Saskatoon may increase in the future, resulting in decreased volumes available for the elevators on the subdivision and the railroad.

The Commission recommends that:

- 1) the 28.7 miles between Urban and Sonningdale be abandoned in 1980; and
- 2) the 15.1 miles between Sonningdale and Baljennie be abandoned on June 30, 1977.

The Commission has recommended that the elevator companies at Arelee, and the Prairie Rail Authority, give priority to the establishment of an off-line elevator at this point. See page 144 of Chapter 5.

CP Rail - Rosetown Subdivision

- From Perdue to Marriott, Saskatchewan - 30.7 miles

The line opened for traffic in 1929. It originally extended to North Rosetown, the junction point with the Kerrobert Subdivision. On August 18, 1975 the Railway Transport Committee authorized the abandonment of 14 miles between North Rosetown and Marriott. This section has been removed.

The rail consists of a mixture of 72, 73, 80 and 85 pound per yard steel, partly worn, when installed, at the time of construction. Gross carrying capacity is limited to 220 thousand pounds.

The subdivision serves three grain delivery points, Feudal, Valley Centre and Marriott.

Saskatchewan Wheat Pool operate one elevator at Feudal and two at Valley Centre. United Grain Growers own three elevators at Marriott. Two of these are used for storage only. Of the six elevators on the subdivision, only two are rated as being in fair condition, the remainder are in poor condition. None of the companies have any plans for building new plants or for major renovations to existing facilities.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 736 thousand bushels per year, or 24 thousand bushels per mile of track. Total annual receipts have decreased to 529 thousand bushels in the crop year 1975-76.

Alternate delivery points for producers still using this subdivision exist at Rosetown, Zealandia, Harris, Tessier, Perdue and Biggar within distances of 12 to 16 miles. If rail service on this subdivision was discontinued the estimated average additional haul would be 7.6 miles.

The Rosetown subdivision was built originally to steal traffic from the Canadian National Rosetown subdivision. It went into service in 1929 when many producers had already shifted from horses and wagons to motor trucks. Road improvements, particularly after World War II, made it easy for producers to abandon the line. Grain that used to be delivered to points on the subdivision is now going to Rosetown, Zealandia, Harris, Tessier, Perdue, Biggar and Saskatoon.

The Commission recommends that the Rosetown subdivision be abandoned on December 31, 1977.

Canadian National - Dodsland Subdivision

- From Biggar, Saskatchewan to Hemaruka, Alberta - 154.0 miles.

The line was constructed in 1912. The 60 pound rail is in fair to poor condition. Gross carrying capacity is 177 thousand pounds.

This subdivision serves 14 grain delivery points: Duperow, Springwater, Ruthilda, Downe, Dodsland, Millerdale, Beaufield, Coleville, Smiley, Dewar Lake and Loverna in Saskatchewan; Esther, New Brigden and Sedalia in Alberta.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 4.9 million bushels per year, equivalent to 32 thousand bushels per mile of track. On the eastern portion of the line from Biggar to Downe, receipts averaged 38 thousand bushels per mile of track. From Dodsland to Dewar Lake receipts in the same period were 85 thousand bushels per mile of track. From Dewar Lake, Saskatchewan to Sedalia, Alberta receipts averaged 21 thousand bushels per mile of track. No traffic is generated on the 19.8 mile section between Sedalia, Alberta and Hemaruka, Alberta.

The elevator plants on the line are generally in poor condition. Out of 25 elevators, four are described as good, six are rated fair and the remainder are poor. Low receipts at stations between Biggar and Dodsland and between Dewar Lake, Saskatchewan and Sedalia, Alberta place these elevators in a doubtful position as parts of the permanent grain handling system even if the rail line remains.

For producers on the western portion of the line, alternate delivery points are available on the CP Rail Coronation subdivision, 15 to

20 miles north of the Dodsland subdivision and on the Canadian National Oyen subdivision, 10 to 25 miles south of the Dodsland subdivision.

The roads in the Alberta portion of the subdivision have been or are being improved.

The farms in the area served by the subdivision are larger than average and generally well equipped with adequate trucks. The average seeded acreage (including summerfallow) per wheat board permit in 1975-76 was 910 acres. Elevator delivers in the same year averaged 8,600 bushels per permit.

The Commission recommends that:

- 1) the 32.6 miles between Dodsland and Dewar Lake be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) a connection be constructed at or near Dodsland to the CP Rail Kerrobert subdivision;
- 3) train service between Dodsland and Dewar Lake, Saskatchewan be provided by CP Rail;
- 4) the 53.3 miles between Biggar and Dodsland be abandoned in 1979;
- 5) the 48.3 miles between Dewar Lake, Saskatchewan and Sedalia, Alberta be abandoned in 1978; and
- 6) the 19.8 miles between Sedalia, Alberta and Hemaruka, Alberta be abandoned on June 30, 1977.

Canadian National - Porter Subdivision

- From Oban to Cando, Saskatchewan - 18.0 miles.

The Porter subdivision was constructed in 1912 and originally extended from Oban, north to Battleford, for a distance of 48.2 miles. In 1974, abandonment of 4.3 miles between Dacer and Battleford was authorized. In 1975, an additional 25.8 miles was abandoned between Cando and Dacer.

The 60 pound rail, the ties and subgrade are all in poor physical condition. Gross carrying capacity is limited to 177 thousand pounds.

The subdivision serves three grain delivery points: Lett, Salter and Cando.

Grain receipts on the subdivision for the ten crop years ending 1974-75 averaged 785 thousand bushels per year, or 44 thousand bushels per mile of track.

Saskatchewan Wheat Pool operate five elevators at the three stations. The elevator at Cando is in fair condition, the others are in poor condition. Cando with ten year average receipts (1965-75) of 498 thousand bushels has the largest handling on the line. The elevators at Lett and Salter with average receipts in the same period of 165 thousand and 122 thousand bushels are operated by one manager.

Alternate elevators for producers in the area exist at Landis, 22 miles from Cando, and Biggar, 29 miles from Cando. If rail service was discontinued the estimated average increase in hauling distance would be 10.2 miles. Some producers would have hauls in excess of 25 miles.

The Commission recommends that the Porter subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Kelfield Subdivision

- From Brass to Kelfield, Saskatchewan - 27.9 miles.

The line was constructed in the years 1911 and 1912. It is now in very poor physical condition. The rail installed at the time of construction weighs 65 pounds per yard. Gross carrying capacity is 220 thousand pounds.

This subdivision serves three grain delivery points: Leipzig, Handel and Kelfield.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.2 million bushels per year, or 42 thousand bushels per mile of track.

Saskatchewan Wheat Pool operate nine elevators at the three locations. Only three of these are rated as being in fair condition while six are described as poor.

Tramping Lake about six miles west of the subdivision prevents direct road access to the west.

Alternate delivery points for producers on this subdivision exist at Landis, Wilkie, Plenty, Druid and Dodsland, at distances of 10 to 24 miles (point to point). If rail service was discontinued, the estimated average additional hauling distance for producers at the north end of the line would be 10.1 miles, for producers at the south end the additional haul would be 5.6 miles.

The Commission recommends that the Kelfield subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Reford Subdivision

- From Wilkie to Kerrobert, Saskatchewan - 42.8 miles.

The line was constructed in the years 1911 to 1913 as the Kerrobert Northeastern Branch. The rail consists of a mixture of 80 and 85 pound per yard steel. Gross carrying capacity is 220 thousand pounds.

The subdivision serves three grain delivery points: Broadacres, Tramping Lake and Revenue.

The village of Tramping Lake, with a 1971 population of 241 is the largest community on the line.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.4 million bushels per year, or 33 thousand bushels per mile of track.

Saskatchewan Wheat Pool operate nine elevators at the three stations on the line. The company rates their physical condition as follows: two good, one fair and six poor. Tramping Lake is designated as a primary station with receipts averaging 700 thousand bushels per year.

Alternate delivery points for producers exist at Scott, Wilkie, Luseland and Kerrobert, at distances ranging from 12 to 22 miles from the stations on the line. If rail service on the Reford subdivision was discontinued the estimated average additional haul would be 11.5 miles.

Tramping Lake, east of the line, presents a 24 mile long barrier to eastward road traffic.

The Commission recommends that the Reford subdivision be retained and placed in the basic network, guaranteed until January 1st, 2000.

CP Rail - Coronation Subdivision

- From Kerrobert, Saskatchewan to Coronation, Alberta - 116.5 miles.

The line was placed in service between October, 1912 and July, 1914. It is now in poor to fair physical condition. The rail is a mixture of 80 and 85 pound with some 100 pound sections on curves from Mile 93 to Mile 115.2. Maximum gross carrying capacity is 263 thousand pounds.

This subdivision serves ten grain delivery points: Superb, Major, Fusilier, Compeer in Saskatchewan; Altario, Kirriemuir, Consort, Loyalist, Veteran and Coronation in Alberta.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 4.1 million bushels per year, equal to 35 thousand bushels per mile of track.

Elevator facilities on the line are only fair.

Part of the area served by the subdivision is ranching and mixed farming country where grain is secondary to the livestock industry. However, there are heavy grain stations at both ends of the line. Superb and Major in Saskatchewan have receipts of 500 thousand to just over 700 thousand bushels per year. Consort with 1975-76 receipts of 817 thousand bushels and Veteran and Coronation with receipts of 940 thousand and 1.4 million bushels respectively are the major stations in Alberta. Low receipts at Fusilier, Saskatchewan and Loyalist, Alberta may force elevator closures at these points.

In Alberta the Coronation line serves a large territory between the Canadian National Category "A" Oyen subdivision, 40 miles to the south and the CP Rail Category "A" Hardisty subdivision, 30 to 40 miles to the north.

In Saskatchewan, the Canadian National Category "B" Bodo subdivision lies 18 to 20 miles north, the Canadian National Category "B" Dodsland subdivision, 13 to 20 miles south.

The Commission recommends that the Coronation subdivision be retained and placed in the basic network, guaranteed until January 1, 2000.

Canadian National - Bodo Subdivision

- From Unity, Saskatchewan to Bodo, Alberta - 51.5 miles.

The line was constructed during the years 1929 to 1931. The rail consists of a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

This subdivision serves five grain delivery points: Reward, Hearts Hill, Cactus Lake, Cosine and Bodo.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 2.3 million bushels per year, equal to 44 thousand bushels per mile of track.

Four companies operate 14 elevators on the line. Of these, seven are rated as being in fair condition and seven are classified as poor. These elevators were constructed in the period 1930 to 1932. Estimated life expectancy without major repairs on many plants was given as five years. Reward and Cactus Lake each with annual receipts of 602 thousand bushels and 564 thousand bushels per year are the principal stations on the line. Hearts Hill has ten year average receipts of 487 thousand bushels. Bodo, at the end of the line, with ten year average receipts

of 432 thousand bushels will probably not have its elevator facilities replaced when worn out.

The Commission recommends that the Bodo subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Cutknife Subdivision

- From Cutoff to Rosemound Junction, Saskatchewan - 3.5 miles.

This line provides a connection for CP Rail to the Canadian National Cutknife subdivision and provides CP Rail access to the Battlefords.

CP Rail has expressed no desire to continue their running rights agreement with Canadian National on the Canadian National Cutknife subdivision.

The Commission recommends that the CP Rail Cutknife subdivision be abandoned on June 30, 1977.

Canadian National - Cutknife Subdivision

- From Cutknife Junction to Rosemound, Saskatchewan - 26.8 miles.

CP Rail has running rights over the Canadian National Cutknife and Battleford subdivisions to provide access to Battleford and North Battleford from their Lloydminster subdivision via CP Rail's 3.5 miles Cutknife subdivision. Since the Canadian National Cutknife subdivision has no traffic originating or terminating on the line, it would appear that it has no future as part of a rail transportation system. CP Rail has expressed no interest in retaining their running rights over Canadian National track.

The Commission recommends that the Canadian National Cutknife subdivision be abandoned on June 30, 1977.

CP Rail - Furness Subdivision

- From Epping, Saskatchewan, the junction point with the Lloydminster subdivision to Paradise Valley, Alberta - 19.5 miles.

The line was constructed by the Canadian Pacific Railway in 1928-29. The rail is a mixture of 72, 73 and 85 pound steel with a rated capacity of 220 thousand pounds.

Alberta Wheat Pool is the only company represented on the line and operates elevators at Rivercourse, McLaughlin and Paradise Valley.

Grain receipts on this subdivision for the ten year period ending 1974-75 averaged 1.2 million bushels per year. Average receipts equal 60 thousand bushels per mile of track.

If this line were abandoned, the hauling distances to alternate elevators for some producers would be over twenty miles.

The Commission recommends that the Furness subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Big Gully Subdivision

- From Lloydminster to Hillmond, Saskatchewan - 24.4 miles.

The line was constructed in the period 1928 to 1930 and went into service on June 25th, 1930. The rail is a mixture of 72, 73 and 85 pound steel, partly worn when installed. Gross carrying capacity is limited to 220 thousand pounds.

This subdivision serves three grain delivery stations: Rex, Greenstreet and Hillmond.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 638 thousand bushels per year, equal to 26 thousand bushels per mile of track.

Pioneer Grain operate two elevators at Rex. These plants were built in 1930 and 1947, and are described as being in good condition. Ten year average receipts at Rex were 156 thousand bushels. Pioneer Grain also operates an elevator at Hillmond. Ten year average receipts at Hillmond were 215 thousand bushels. The Saskatchewan Wheat Pool elevator at Hillmond is now closed. Saskatchewan Wheat Pool and Pioneer Grain operate elevators at Greenstreet. Greenstreet has a ten year average handle of 267 thousand bushels.

Alternate delivery points for producers on this subdivision would be Lloydminster, for producers on the south, and Paradise Hill on the Bolney Subdivision for those at the north end of the line. If rail service was discontinued, the estimated average increase in hauling distance would be 8.6 miles.

The Commission is aware of the hilly terrain in the area and its effect on trucking and road costs. However, the low level of grain receipts at the three stations on the line indicate a questionable future for the elevators, even if the line remained. In addition, new hauling distances will not be unreasonable for most producers.

The Commission recommends that the Big Gully Subdivision be abandoned in 1978.

Canadian National - Battleford Subdivision

- From Mile .09 to Battleford Junction, Saskatchewan - 7.8 miles

The line was constructed in 1906. The 60 pound rail is in fair condition. Gross carrying capacity is limited to 177 thousand pounds.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 632 thousand bushels per year, equal to 81 thousand bushels per mile of track.

Saskatchewan Wheat Pool and United Grain Growers each operate an elevator at Battleford. Both elevators are rated good. These plants were constructed in 1960 and 1967.

Elevator rationalization in the area has resulted in a dramatic increase in receipts at Battleford. Ten year average receipts of 632 thousand bushels compared to receipts of 1.2 million bushels in the crop year 1975-76 indicate the change that has taken place at Battleford.

If rail service on the Battleford subdivision was discontinued grain could be delivered to North Battleford at an additional trucking distance of two miles.

The additional traffic would increase congestion in downtown North Battleford since many of the elevators are located almost in the centre of the city. It is also questionable whether the present elevators in North Battleford could handle the volume of grain now being delivered to Battleford without serious congestion.

The Commission recommends that the Battleford subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.11
Commission Recommendations For Category "B" Branch Lines
REGION 11

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED				
						1977 JUNE 30	DEC. 31	1978	1979	1980
CP ASQUITH	URBAN	SONNINGDALE	28.7							28.7
	SONNINGDALE	BALJENNIE	15.1			15.1				
CN BATTLEFORD	BATTLEFORD	BATTLEFORD JCT	7.8		7.8					
CP BIG GULLY	LLOYDMINSTER	HILLMOND	24.4					24.4		
CN BODO	UNITY	BODO	51.5		51.5					
CN CONQUEST	CONROSE JCT	BEECHY	94.3	94.3						
CP CORONATION	KERROBERT	CORONATION	116.5	116.5						
CP CUTKNIFE	CUTOFF	ROSEMOUND	3.5			3.5				
CN CUTKNIFE	CUTKNIFE JCT	ROSEMOUND	26.8			26.8				
CN DODSLAND	BIGGAR	DODSLAND	53.3						53.3(3)	
	DODSLAND	DEWAR LAKE	32.6		32.6(1)					
	DEWAR LAKE	SEDALIA	48.3					48.3		
	SEDALIA	HEMARUKA	19.8			19.8				
CN ELROSE	CONQUEST JCT	GLIDDEN	104.3	104.3						
	GLIDDEN	ELROSE JCT	16.3			16.3				
CN MANTARIO	GLIDDEN	ALSASK	43.8	43.8						
CP KELFIELD	BRASS	KELFIELD	27.9		27.9					
CP MATADOR	GUNNORTH	WARTIME	7.5				7.5(4)			
	WARTIME	KYLE	30.4		30.4(2)					
	KYLE	MATADOR	5.1				5.1			
CP McMorran	MILDEN	GUNNORTH	30.5				30.5(4)			
	GUNNORTH	McMorran	30.0				30.0			
CN PORTER	OBAN	CANDO	18.0		18.0					
CP REFORD	KERROBERT	WILKIE	42.8	42.8						
CP ROSETOWN	PERDUE	MARRIOTT	30.7				30.7			
CN WHITE BEAR	ESTON	LACADENA	24.2		24.2					
	LACADENA	WHITE BEAR	10.1						10.1	
CN ACADIA VALLEY	EYRE	ACADIA VALLEY	24.3		24.3					
CP FURNESS	EPPING	PARADISE VALLEY	19.5		19.5					
TOTAL REGION 11			988.0	401.7	236.2	81.5	103.8	72.7	63.4	28.7

(1) TRANSFER TO CP RAIL.

(2) TRANSFER TO CNR.

(3) FOLLOWING TRANSFER OF DODSLAND - DEWAR LAKE SECTION TO CP RAIL.


(4) FOLLOWING CONSTRUCTION OF CONNECTION AT CN WARTIME FOR WARTIME - KYLE SECTION OF MATADOR SUBDIVISION.

REGION 12


LEGEND

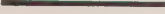
 Basic Network, Guaranteed to Jan. 1, 2000

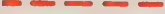
Commission Recommendations

 To be added to the Basic Network

 To be transferred to The Prairie Rail Authority

 To be abandoned, 1977-1981

 New construction

 Transfer from CP Rail to CNR

 Transfer from CNR to CP Rail



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of Canada

Gouvernement
du Canada

Hall Commission

Commission Hall



REGION 12

Canadian National - Carlton Subdivision

- From Dalmeny to Carlton, Saskatchewan - 35.8 miles.

The line was constructed between the years 1908 and 1914. It is now in poor physical condition. Gross carrying capacity on the line is 177 thousand pounds. Service has been suspended on occasions because of snow or soft track conditions resulting from excessive moisture.

The subdivision serves five grain delivery points: Mennon, Hepburn, Waldheim, Laird and Carlton.

The Town of Waldheim with a 1971 population of 609 is the largest community on the line. Laird and Hepburn with populations of 218 and 305 are the villages served by the subdivision.

There are 15 elevators on the Carlton subdivision that were constructed in the period 1909 to 1928. They are described by their owners as being in fair to poor condition. Life expectancies of the majority of these facilities range from three to five years. The Commission is not aware of any plans to rebuild or upgrade any of the elevators on the line.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 2.1 million bushels per year, or 58 thousand bushels per mile of track.

Pioneer Grain Company shares a total market of 463 thousand bushels at Carlton with Saskatchewan Wheat Pool and United Grain Growers. Low receipts at Mennon (211 thousand bushels)

where Saskatchewan Wheat Pool is represented may result in closure at that point. Cargill Grain Company and Saskatchewan Wheat Pool share the market of 484 thousand bushels at Hepburn where Cargill Grain Company has incurred costs in excess of 20 cents per bushel handled in the two years 1973-74 and 1974-75. Waldheim (504 thousand bushels) and Laird (413 thousand bushels) are single company points represented by United Grain Growers and Saskatchewan Wheat Pool respectively.

Good roads in the area, proximity to Saskatoon and mill door premiums, as high as 13 cents per bushel, have caused significant quantities of grain to move to the Saskatoon mills by truck. Current stop off charges of 18 cents per 100 pounds will discourage railroad movement of grain to the mills in Saskatoon from this line.

Duck Lake, Rosthern and Hague on the Category "A" Duck Lake subdivision at distances of 14 to 17 miles from Carlton, Laird, Waldheim and Hepburn are alternate delivery points for producers at the north end of the line. Dalmeny, eight miles distant could serve the producers at Mennon in the event of elevator closure or rail line discontinuance. If rail service was discontinued, the estimated average additional hauling distance for producers would be 8.4 miles.

Because of the availability of alternate delivery points at reasonable distances, good roads in the area, the volume of grain flowing to Saskatoon, the physical condition of the elevators on the line, the high cost of rehabilitating the rail line, three million dollars (\$83,495 per mile), retaining the present rail or

eight million dollars (\$222,655 per mile) to upgrade the line to heavy hopper car standards.

The Commission recommends that the Carlton Subdivision be abandoned in 1980.

The Commission has recommended that the elevator company at Waldheim, and the Prairie Rail Authority, give priority to the establishment of an off-line elevator at this point. See page 144 Chapter 5.

Canadian National - Blaine Lake Subdivision

- From Big River Junction to Denholm, Saskatchewan - 87.8 miles

The line was constructed between the years 1911 and 1913. The 60 pound rail is in fair condition. Gross carrying capacity is 177 thousand pounds.

There are eight grain delivery points on the line. Parkside, Leask, Marcelin, Blaine Lake, Krydor, Hafford, Speers and Richard.

There are three towns on the line: Leask, Blaine Lake and Hafford, with 1971 populations ranging from 437 to 672. Parkside, Marcelin, Krydor and Speers are villages with populations ranging from 112 to 307.

Elevator condition on the subdivision is better than average. Of 28 elevators on the line six are rated good and ten are rated fair.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 4.9 million bushels per year, or 56 thousand bushels per mile of track.

The Commission recommends that the portion of the Blaine Lake Subdivision from Big River Junction to Denholm be retained and placed in the basic network and guaranteed to January 1, 2000.

Canadian National - Robinhood Subdivision

- From Speers to Turtleford, Saskatchewan - 101.5 miles.

The line was constructed between the years 1925 and 1928, and is now in poor physical condition. The rail consists of a mixture of 56, 60 and 85 pound steel and varies from fair to good condition. Maximum gross carrying capacity is 177 thousand pounds.

With the closure of the Mullingar Elevators on August 17, 1976, the subdivision now serves eight grain delivery points: Keatley, Mayfair, Rabbit Lake, Glenbush, Medstead, Glaslyn, Fairholme and Livelong.

There are five villages: Mayfair, Mullingar, Rabbit Lake, Medstead and Livelong with 1971 populations of 134, 206, 179, and 126 respectively. The town of Glaslyn with a 1971 population of 355 is the largest community on the line.

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 2.6 million bushels per year or 25 thousand bushels per mile of track. Receipts on the Speers Glaslyn portion averaged 33 thousand bushels per mile of track for the same period. Rabbit Lake and Glaslyn with average receipts of 576 thousand bushels and 449 thousand bushels have the largest handlings on the subdivision. Fairholme and Livelong with receipts of 122 thousand and 172 thousand bushels would appear to have limited futures as parts of a permanent grain gathering network.

Grain from Livelong could move via highway 3 to Turtleford, a distance of 14 miles. From Fairholme, the distance is 21 miles to Turtleford on highway 3, nine miles to Glaslyn on highway 3, or 20 miles to Mervin on a grid road. The estimated average additional haul is 7.8 miles if present rail service is discontinued.

The geography of the region, the vast area served and distances to other railroads dictate retention of some rail service to this part of Saskatchewan.

The Commission recommends that;

- 1) the 69.6 miles between Speers Junction and Glaslyn be retained and placed under the jurisdiction of the Prairie Rail Authority; and
- 2) the 31.9 miles between Glaslyn and Turtleford Junction be abandoned on December 31, 1977.

Canadian National - Amiens Subdivision

- From Amiens Junction to England, Saskatchewan - 75.0 miles

The line was constructed in the years 1927 to 1929, and is in fair physical condition. The 80 pound rail in place normally permits a gross carrying capacity to 220 thousand pounds. Present track conditions restrict the gross carrying capacity to 177 thousand pounds.

The subdivision serves four grain delivery points: Mount Nebo, Shell Lake, Spiritwood and Bapaume.

There are six communities on the line with 1971 populations as listed: Mount Nebo (53), Shell Lake (254), Mildred (54), Spiritwood (714), Bapaume (28) and Belbutte (38).

Grain receipts on the subdivision in the ten crop years ending 1974-75 averaged 1.3 million bushels per year or 18 thousand bushels per mile of track. On the portion of the subdivision from Spiritwood to Medstead receipts for the same period averaged 36 thousand bushels per mile of track. Spiritwood with ten year average receipts of 702 thousand bushels, has the largest handling on the subdivision. Bapaume with 228 thousand bushels, Shell Lake with 253 thousand bushels and Mont Nebo with 146 thousand bushels would appear to have limited futures as grain stations due to low receipts.

Out of a total of 10 elevators on the subdivision the Pioneer Grain Company plant at Spiritwood is the only one rated as being in good condition.

Alternate elevators for producers in the area exist at Canwood, 16 miles from Mont Nebo and 23 miles from Shell Lake. Spiritwood and Bapaume are 21 and 23 miles from Leoville on the Meadow Lake subdivision. If rail service was discontinued, the estimated average increase in hauling distance would be 12.2 miles.

The Commission recommends that:

- 1) the 25.6 miles between Spiritwood and England be retained and placed under the jurisdiction of the Prairie Rail Authority; and
- 2) the 49.4 miles between Amiens Junction and Spiritwood be abandoned in 1979.

Canadian National - Hatherleigh Subdivision

- From Prinham to Avery, Saskatchewan - 31.6 miles.

The line was constructed between the years 1929 and 1931. The 80 and 85 pound rail is in fair condition and permits a gross carrying capacity of 177 thousand pounds. This line has seven wood trestles. The trestle at Mile 19.3 is one of the largest pile trestles in Western Canada being 848 feet long and 63 feet in height.

CP Rail has a running rights agreement with Canadian National Railway over the Hatherleigh subdivision. This was originally required to serve the Whitkow and Medstead subdivisions. With the abandonment of the Whitkow subdivision, authorized in September, 1975 and a deferred decision on the Medstead subdivision abandonment, CP Rail no longer require running rights over the Hatherleigh subdivision. With elevator closures at Iffley and Scentgrass, the Hatherleigh subdivision now serves one elevator at Sandwith.

Grain traffic of 152 carloads in 1974 amounted to 99.3 percent of the total traffic. Total grain receipts in the ten crop years ending 1974-75 averaged 113 thousand bushels per year or 13.5 thousand bushels per mile of track.

Pioneer Grain operate an elevator at Sandwith and describe it as being in good condition.

Alternate elevators exist at Glenbush and Medstead, 10 to 15 miles respectively from Sandwith. Estimated average additional hauling distance for producers at the south end of the line would be 7.4 miles, for those in the northern portion of the area it

would be 5.3 miles if present rail service was discontinued.

The Commission recommends that the Hatherleigh subdivision be abandoned on December 31, 1977.

Canadian National - Turtleford Subdivision

- From North Battleford to St. Walburg, Saskatchewan - 77.0 miles.

The line was constructed between the years 1910 and 1921 and is now in poor physical condition. Maximum gross carrying capacity is 177 thousand pounds.

The line serves a large area and almost parallels the North Saskatchewan River, which prevents easy road access to the south.

The line serves ten grain delivery points: Hamlin, Prince, Meota, Cavalier, Vawn, Edam, Mervin, Turtleford, Spruce Lake and St. Walburg.

Three villages, Meota, Vawn and Spruce Lake with 1971 populations of 233, 119 and 106 and the towns of Edam, Turtleford and St. Walburg with populations of 334, 419 and 656 are also served by the subdivision.

Grain receipts on the subdivision for the ten crop years ending 1974-75 averaged 4.3 million bushels per year or 56 thousand bushels per mile of track.

There are 20 elevators on the subdivision. Five of the elevators are rated as being in good condition, six are fair and nine are described by the companies as being in poor condition.

In view of the large area of Northwest Saskatchewan served by

the subdivision, the volume of grain and the absence of attractive alternatives, the Commission recommends that the Turtleford subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

Canadian National - Bolney Subdivision

- From Spruce Lake Junction to Frenchman Butte, Saskatchewan - 28.2 miles.

The line was constructed in 1928 and 1929. The 60 pound rail limits the gross carrying capacity to 177 thousand pounds.

Paradise Hill is the only grain delivery point on the subdivision.

Cargill Grain Company operate two elevators at Paradise Hill, one of them recently had a new scale installation and other improvements. Saskatchewan Wheat Pool also operate an elevator at Paradise Hill.

Grain receipts on the subdivision (Spruce Lake Junction to Paradise Hill) in the ten crop years ending 1974-75 averaged 492 thousand bushels per year. Traffic density is low and averaged 32 thousand bushels per mile of track from 1965-75, but has increased to 51 thousand bushels per mile of track in the 1975-76 crop year.

Paradise Hill is the only delivery point for a large area in Northwest Saskatchewan. Its increasing importance as a grain delivery point can be demonstrated by comparing average annual receipts of 492 thousand bushels (1965-75) to 1975-76 receipts of 779 thousand

bushels. Some land is still being cleared in the area. When all of the potential grain producing land is brought into production, total receipts at the point might reach one million bushels per year.

The Commission recommends that:

- 1) the 15.4 miles between Spruce Lake Junction and Paradise Hill be retained and placed under the jurisdiction of the Prairie Rail Authority; and
- 2) the 12.8 miles between Paradise Hill and Frenchman Butte be abandoned June 30, 1977.

TABLE XI.12

Commission Recommendations For Category "B" Branch Lines

REGION 12

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED				
						1977 JUNE 30	DEC.31	1978	1979	1980
CN AMIENS	AMIENS JCT	SPIRITWOOD	49.4						49.4	
	SPIRITWOOD	ENGLAND	25.6		25.6					
CN BLAINE LAKE	BIG RIVER JCT	DENHOLM	87.8	87.8						
CN ROBINHOOD	SPEERS	GLASLYN	69.6		69.6					
	GLASLYN	TURTLEFORD	31.9				31.9			
CN HATHERLEIGH	SANDWITH	AVERY	8.4				8.4			
	SANDWITH	PRINHAM	23.2			23.2				
CN TURTLEFORD	N.BATTLEFORD	ST. WALBURG	77.0	77.0						
CN BOLNEY	SPRUCE LAKE	PARADISE								
	JCT	HILL	15.4		15.4					
	PARADISE	FRENCHMAN	12.8			12.8				
	HILL	BUTTE								
CN CARLTON	DALMENY	CARLTON	35.8							35.8
TOTAL REGION 12			436.9	164.8	110.6	36.0	40.3		49.4	35.8

REGION 13

LEGEND

Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

To be added to the Basic Network
To be transferred to The Prairie Rail Authority
To be abandoned, 1977-1981

New construction

Transfer from CP Rail to CNR

Transfer from CNR to CP Rail

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REGION 13

CP Rail - Pennant Subdivision

- From Wickett to Verlo , Saskatchewan - 24.5 miles

The line was built in 1929. It is constructed with a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

Three grain delivery points, Verlo , Hazlet and Roseray, are served by the Pennant Subdivision.

The ten year average grain receipts for the period ending 1974-75 were 1.6 million bushels, representing 65 thousand bushels per mile of track.

There is a sodium sulphate plant at Snakehole Lake, which is on a private spur, approximately three miles west of Roseray. Construction of a three mile link from the Grant Spur to Roseray, would permit the abandonment of 12.2 miles of this line, without affecting the three delivery points.

The Commission recommends that:

- 1) The portion of the Pennant Subdivision between Roseray and Verlo be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) A three mile link be constructed between Roseray and Grant Spur of CP Rail at the Francana Mine at Snakehole Lake;

- 3) Following construction of the link that 12.2 mile portion of the Pennant Subdivision from Roseray to Wickett be abandoned in 1980.

CP Rail - Hatton Subdivision

- From Hatton to Golden Prairie, Saskatchewan - 17.1 miles

Constructed in 1929 this line has a mixture of 80 and 85 pound steel. The line has a gross carrying capacity of 220 thousand pounds.

This subdivision serves only one grain delivery point at Golden Prairie.

The ten year average grain receipts for the period ending 1974-75 was 743 thousand bushels per year, equal to 43 thousand bushels per mile of track. Alternate delivery points exist on the Maple Creek subdivision of the CP Rail Main Line, and the CP Rail Burstall Subdivision 22 miles north.

There are undeveloped resources of sodium sulphate located adjacent to this line at Bitter Lake.

The Commission recommends that the Hatton Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Schuler Spur

- From Pivot to Schuler, Alberta - 6.8 miles

This line was constructed in 1924. The rail is a mixture

of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

The only delivery point is Schuler where Pioneer Grain Company Limited and the Alberta Wheat Pool are represented. Both companies indicated they will be upgrading their facilities provided the line is retained.

Grain receipts on this subdivision have averaged 774 thousand bushels per year in the ten year period ending 1974-75. Average receipts equal 114 thousand bushels per mile of track. Receipts in 1975-76 crop year exceeded one million bushels.

Some years much of the grain from Schuler is trucked into Medicine Hat flour mills, and to feed lots, however in the 5 years (1970 - 1974) an average of 287 cars per year were shipped from this spur, or an average of over 85 thousand bushels per mile of track.

The Commission recommends that the Schuler Spur be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Empress Subdivision

- From Leader, Saskatchewan to Empress, Alberta - 23.6 miles

This section of the Subdivision was placed in operation in 1914. The rail is all 85 pound steel, with a gross carrying capacity of 263 thousand pounds.

There are two delivery points on the line at Empress and Estuary. There are two Alberta Wheat Pool elevators at Empress and three

N.M. Paterson & Sons Limited elevators at Estuary. United Grain Growers Limited recently closed their elevators at Westerham.

Grain receipts on this portion of the subdivision averaged 937 thousand bushels per year in the ten year period ending 1974-75. Average receipts equal 40 thousand bushels per mile of track.

The Empress and Bassano Subdivisions have in the past acted as by-passes to the main line between Swift Current and Bassano. The portion of the Empress Subdivision carries overhead traffic from the stations east of Leader westward to the Bassano Subdivision.

The Commission recommends that this portion of the CP Rail Empress Subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

CP Rail - Bassano Subdivision

- From Empress to Bassano, Alberta - 118.4 miles

This line was placed in operation in 1914. The rail is a mixture of 85 and 100 pound steel with a gross carrying capacity of 263 thousand pounds.

The delivery points on this line are Bindloss, Buffalo, Jenner, Idlesleigh, Duchess and Rosemary. Alberta Wheat Pool is represented at all points, Pioneer Grain Company Limited is at Bindloss and Rosemary.

Grain receipts on this subdivision have averaged 1.4 million bushels per year in the ten years ending 1974-75. Average receipts equal 12 thousand bushels per mile of track.

This subdivision carries overhead traffic westward from the Empress and Burstall Subdivisions.

There is a crude oil depot at Princess, 80 percent of the originating or terminating traffic on the line is crude oil.

If this line were abandoned it would leave an area from north to south of up to 100 miles with no rail service.

The Commission recommends that this subdivision be retained and placed in the basic network guaranteed until January 1, 2000.

CP Rail - Strathmore Subdivision

- From Langdon to Gleichen, Alberta - 34.8 miles

This line was placed in operation in 1883. It is constructed with 100 pound steel with a grain carrying capacity of 263 thousand pounds.

The delivery points are Stobart, Namaka, Strathmore and Cheadle. Alberta Wheat Pool has elevators at all points, with Cargill Grain Company Limited represented at Namaka. Alberta Wheat Pool plans to close the Stobart elevator before July 31, 1977.

Grain receipts on this subdivision have averaged 1.4 million bushels per year in the ten year period ending 1974-75. Average receipts equal 40 thousand bushels per mile of track. The Strathmore to Namaka section averages 56 thousand bushels per

mile of track.

Because of soil instability the line has been impassable at mile 9.7 between Stobart and Namaka for a number of years.

Roads in the area are adequate.

The Commission recommends that;

- 1) The 14.1 mile section of this subdivision between Langdon and Strathmore be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) The 7.8 mile section of this subdivision between Strathmore and Namaka be abandoned in 1980;
- 3) The 12.9 mile section of this subdivision between Namaka and Gleichen be abandoned

December 31, 1977.

CP Rail - Cassils Subdivision

- From Cassils to Scandia, Alberta - 23.4 miles

This line was constructed in 1928. The rail is a mixture of 60 and 85 pound steel with a gross carrying capacity of 177 thousand pounds.

There are no elevators on this line.

The Commission received a petition bearing 101 producer signatures requesting removal of the line so that pivot irrigation systems could be installed on their land.

The Commission recommends that this subdivision be abandoned June 30, 1977.

CP Rail - Suffield Subdivision

- From Suffield to Lomond, Alberta - 83.9 miles

This line was constructed between 1913 and 1914. The rail is a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

Delivery points are located at Hays, Grantham, Vauxhall, Retlaw, Enchant, Travers and Lomond. Alberta Wheat Pool is located at all points, with Pioneer Grain Company Limited and United Grain Growers Limited also located at Lomond.

Grain receipts on this subdivision have averaged 3.2 million bushels per year for the ten year period ending 1974-75. Average receipts equal 66 thousand bushels per mile of track on the Hays to Lomond section of this subdivision. No traffic has been generated on the Hays to Suffield portion for some years.

Irrigation is expanding the area, and the production of Soft White Spring Wheat is on the increase. Vauxhall has Alfalfa and Vegetable Produce plants which require rail service for shipment of their product.

The Commission recommends that;

- 1) The portion of this subdivision between Lomond and Hays (48.6 miles) be retained and placed under the jurisdiction of the Prairie Rail Authority;

- 2) The 35.3 mile portion of this subdivision
between Hays and Suffield be abandoned
June 30, 1977.

CP Rail - Lomond Subdivision

- From Lomond to Eltham, Alberta - 63.2 miles

This line was placed in operation from Lomond to Arrowwood in 1925, and extended from Arrowwood to Eltham in 1930. The rail is a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

There are eight delivery points at Armada, Milo, Queenstown, Shouldice, Arrowwood, Mossleigh, Farrow, and Herronton. Alberta Wheat Pool, United Grain Growers Limited and Pioneer Grain Company Limited are represented on the line. The United Grain Growers Limited have indicated they plan to close their plants at Farrow and Arrowwood.

Receipts on this subdivision have averaged 3.5 million bushels per year in the ten year period ending 1974-75. Average receipts equal 56 thousand bushels per mile of track.

Irrigation is expanding in areas along this line, consequently more acreage is being brought into production, and depending upon markets, this area could undergo extensive growth.

The Commission recommends that the Lomond Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Cardston Subdivision

- From Raymond to Glenwood, Alberta - 66.7 miles

In 1905 the Canadian Pacific Railway took over the section of this line from Stirling to Cardston from the St. Mary's River Railroad, and the portion from Cardston to Glenwood was placed in operation in 1927. The rail is a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds.

Delivery points are located at Welling, Magrath, Spring Coulee, Cardston, Glenwood and Hill Spring. The Alberta Wheat Pool is located at all stations with the United Grain Growers Limited at Cardston and Glenwood, and Parrish and Heimbecker Limited at Cardston.

Grain receipts on this subdivision have averaged three million bushels per year in the 10 year period ending 1974-75. Average receipts equal 44 thousand bushels per mile of track. The portion of this subdivision from Raymond to Cardston would average approximately 60 thousand bushels per mile of track.

There are fertilizer depots on trackage at Welling and Cardston.

The total traffic is made up of 72 percent grain.

Roads in the area are adequate.

The Commission recommends that;

- 1) The 39.0 miles of this subdivision between Raymond and Cardston be retained and placed under the jurisdiction of the Prairie Rail Authority.

- 2) The 27.7 miles of this subdivision between Cardston and Glenwood be abandoned in 1980.

CP Rail - Woolford Subdivision

- From Raley to Whiskey Gap, Alberta - 21.0 miles

The Canadian Pacific Railway took over the section from Raley to Woolford from the St. Mary's River Railroad, widened the gauge and commenced operations in 1912. The portion from Woolford to Whiskey Gap commenced operations in 1929. The rail is a mixture of 56 to 85 pound steel with a gross carrying capacity of 220 thousand pounds.

There are two delivery points on the subdivision, Woolford and Whiskey Gap, both owned by Alberta Wheat Pool.

The four elevators, two at each point, were constructed between 1923 and 1948, and have an estimated life of between 5 and 10 years. Alberta Wheat Pool have stated they will not be upgrading these elevators.

Grain receipts on this subdivision have averaged 402 thousand bushels per year in the ten years ending 1974-75. Average receipts equal 19 thousand bushels per mile of track.

Alternate facilities for this grain are available in Cardston and Magrath. The extra hauling distance involved is estimated at 9.5 to 13.8 miles. A few producers may have a haul in excess of 20 miles.

The Commission recommends that the Woolford Subdivision be abandoned December 31, 1977.

TABLE XI.13
Commission Recommendations For Category "B" Branch Lines
REGION 13

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977		1978	1979	1980	1981
						JUNE 30	DEC. 31				
CP PENNANT	ROSERAY	VERLO	12.3		12.3						
	WICKETT	ROSERAY	12.2							12.2	
	ROSERAY	GRANT SPUR			3.0(1)						
CP HATTON	HATTON	GOLDEN PRAIRIE	17.1		17.1						
CP SCHULER SPUR	PIVOT	SCHULER	6.8		6.8						
CP WOOLFORD	RALEY	WHISKY GAP	21.0				21.0				
CP CARDSTON	RAYMOND	CARDSTON	39.0		39.0						
	CARDSTON	GLENWOOD	27.7							27.7	
CP SUFFIELD	LOMOND	HAYS	48.6		48.6						
	HAYS	SUFFIELD	35.3			35.3					
CP LOMOND	LOMOND	ELTHAM	63.2		63.2						
CP CASSILS	CASSILS	SCANDIA	23.4			23.4					
CP STRATHMORE	LANGDON	STRATHMORE	14.1		14.1						
	STRATHMORE	NAMAKA	7.8							7.8	
	NAMAKA	GLEICHEN	12.9				12.9				
CP EMPRESS	LEADER	EMPRESS	23.6	23.6							
CP BASSANO	EMPRESS	BASSANO	118.4	118.4							
TOTAL REGION 13			483.4	142.0	204.1	58.7	33.9			47.7	
(1) NEW CONSTRUCTION 3.0 MILES.											

REGION 14

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority

— To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

+ + + + + Transfer from CNR to CP Rail



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REGION 14

CP Rail - Crossfield Subdivision

- From Crossfield to Cremona, Alberta - 27.1 miles

The line was constructed by the Canadian Pacific Railway in 1931 and placed in operation the same year. The rail is a mixture of 72, 73, 80 and 85 pound steel, with a gross carrying capacity of 177 thousand pounds. Delivery points are located at Nier, Madden, Dogpound and Cremona. Alberta Wheat Pool and Pioneer Grain are located on this line. Parrish & Heimbecker Limited has stated that it intends to close its plant at Cremona in 1977.

Grain receipts on this subdivision have averaged 725 thousand bushels per year in the ten year period ending 1974-75. Average receipts equal 27 thousand bushels per mile of track. It is estimated that over 50 percent of the grain in the area is trucked to domestic markets.

Alternate facilities are available at Crossfield, Carstairs and Didsbury, with a maximum distance between points of 14.2 miles.

The Commission recommends that the Crossfield Subdivision be abandoned December 31, 1977.

The Commission has recommended that the elevator companies at Cremona, and the Prairie Rail Authority, give priority to the establishment of an off-line elevator at this point. See page 144 Chapter 5.

CP Rail - Alberta Central Subdivision

- From Forth to Otway, Alberta - 58.0 miles

This subdivision was constructed by the Alberta Central Railway in 1913, and purchased by the Canadian Pacific Railway in 1914. The rail is a mixture of 65, 80 and 85 pound steel, with a gross carrying capacity of 177 thousand pounds. The only delivery point is Benalto. The four elevators were constructed between 1918 and 1934. United Grain Growers have stated they will close their elevators at Benalto before July 31, 1977.

Grain receipts on this subdivision have averaged 474 thousand bushels per year in the ten year period ending 1974-75. Average receipts equal only eight thousand bushels per mile of track.

There is also a Cominco Fertilizer Depot on trackage at Benalto which is serviced almost entirely by truck.

Alternate facilities for this grain are available at Eckville, a distance of seven miles, and Sylvan Lake a distance of ten miles. A considerable amount of grain from this area is now being trucked into Red Deer, a distance of approximately 22 miles.

The Commission recommends that the CP Rail Alberta Central Subdivision be abandoned December 31, 1977.

CP Rail - Langdon Subdivision

- From Cosway to Kneehill, Alberta - 37.0 miles
- From Rosedale to East Coulee, Alberta - 8.7 miles

This line was placed in operation as follows: Cosway to Kirkpatrick in 1921, Kirkpatrick to Kneehill in 1923, and Rosedale to East Coulee in 1929. The rail is a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds. Delivery

points are Carbon, Sharples, Hesketh and Kirkpatrick with Alberta Wheat Pool, Pioneer Grain Company Limited and Parrish & Heimbecker Limited represented.

Grain receipts on this subdivision have averaged 1.7 million bushels per year in the ten year period ending 1974-75. Average grain receipts equal 46 thousand bushels per mile of track.

This subdivision runs through a very good grain growing area. There is also the possibility of the Century Coal Mine, located at East Coulee, being reactivated.

The Commission recommends that both sections of the Langdon Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

CP Rail - Rosemary Subdivision

- From East Coulee to Finnegan, Alberta - 23.1 miles

The line from Finnegan to East Coulee commenced operations in 1929. The rail is a mixture of 80 and 85 pound steel with a gross carrying capacity of 220 thousand pounds. There are no delivery points on this line.

The Commission recommends that the CP Rail Rosemary Subdivision between East Coulee and Finnegan be abandoned June 30, 1977.

*Footnote

There is the possibility that one mile of track extending eastward from the junction with the

Langdon Subdivision may be required to service the coal mine in that area, if this possibility develops it must be taken into account before the rail is lifted.

Canadian National Railway - Sheerness Subdivision

- From Sheerness to Wardlow, Alberta - 42.2 miles

This line was constructed between 1918 and 1920 with 80 pound steel and a gross carrying capacity of 177 thousand pounds. There are no grain delivery points on this line.

There is coal being loaded out at Sheerness and oil at other points along the subdivision south to Cessford. There is no rail traffic generated between Cessford and Wardlow. The proposed Dodds - Roundhill Thermal Generating plant will now be constructed at or near Sheerness, and will require rail service. The heavy oil being shipped over this line is of sufficient quantities that trucking would be impractical.

The Commission recommends that;

- 1) the 34.8 mile portion of the Sheerness Subdivision between Sheerness and Cessford be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) the 7.4 mile section of the Sheerness Subdivision between Cessford and Wardlow

- 2) The 30.9 mile portion of this subdivision between Donalda and Ferlow Junction be abandoned December 31, 1977.

Canadian National Railways - Endiang Subdivision

- From Hanna to Nevis, Alberta - 75.2 miles

This line was constructed between 1911 and 1925, with a mixture of 60 and 80 pound steel, and a carrying capacity of 177 thousand pounds. Delivery points are located at Scapa, Endiang, and Byemoor. Alberta Wheat Pool is located at Endiang and Byemoor, with United Grain Growers Limited at Scapa.

Grain receipts on this subdivision have averaged 799 thousand bushels per year in the ten years ending 1974-75. Average receipts equal 23 thousand bushels per mile of track on the Hanna and Byemoor section of this subdivision. The portion from Byemoor to Nevis has generated no traffic for several years, and there are no indications of any revived traffic.

The Commission recommends that;

- 1) The 34.3 mile portion of this subdivision between Hanna and Byemoor be retained and placed under the jurisdiction of the Prairie Rail Authority;
- 2) The 40.9 mile portion of this subdivision between Byemoor and Nevis be abandoned June 30, 1977.

be abandoned June 30, 1977.

Canadian National Railways - Stettler Subdivision

- From Ferlow Junction to Dinosaur, Alberta - 108.0 miles

This line was constructed in 1910, with a mixture of 60, 80 and 85 pound steel with a gross carrying capacity of 177 thousand pounds.

Delivery points on the line are Edberg, Meeting Creek, Donalda, Red Willow, Big Valley, Rumsey, Rowley and Morrin. Alberta Wheat Pool, Cargill Grain Company Limited, Pioneer Grain Company Limited, United Grain Growers Limited and Parrish & Heimbecker Limited have elevators at various points on this line.

Grain receipts on this subdivision have averaged 3.6 million bushels per year for the ten year period ending 1974-75. Average receipts equal 33 thousand bushels per mile of track.

Edberg and Meeting Creek, the two most northerly points on the line have a ten year average of 312 thousand bushels and 247 thousand bushels respectively. The elevators at these points were constructed in 1916, 1918 and 1928.

There is passenger service on a daily basis between Drumheller and Edmonton over this line.

The Commission recommends that;

- 1) The 77.1 mile portion of this subdivision between Dinosaur and Donalda be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National Railways - Alliance Subdivision

- From Forestburg to Alliance, Alberta - 14.3 miles

This line was constructed in 1915 and 1916 with 60 pound steel and a gross carrying capacity of 177 thousand pounds.

Alberta Wheat Pool, Pioneer Grain Company Limited and United Grain Growers Limited are represented at both Galahad and Alliance. Elevators at both points are in good condition. Grain receipts on this portion of the subdivision have averaged 1.7 million bushels per year in the ten year period ending 1974-75. Average receipts equal 115 thousand bushels per mile of track.

Canadian National Railways suggested that they would upgrade this portion of the subdivision to 263 thousand pound standard when they rehabilitate the basic network portion of this line from Camrose to Forestburg. Three grain companies also strongly recommended retention of this line. There is also a possibility of some industrial development taking place at Alliance.

The Commission recommends that the Alliance Subdivision be retained and placed under the jurisdiction of the Prairie Rail Authority.

TABLE XI.14

Commission Recommendations For Category "B" Branch Lines

REGION 14

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 Dec. 31		1978	1979	1980	1981
CP ROSEMARY	EAST COULEE	FINNEGAN	23.1			23.1					
CP CROSSFIELD	CREMONA	CROSSFIELD	27.1				27.1				
CP LANGDON	COSWAY	KNEEHILL	37.0		37.0						
	ROSDALE	EAST COULEE	8.7		8.7						
CN SHEERNESS	SHEERNESS	CESSFORD	34.8		34.8						
	CESSFORD	WARDLOW	7.4			7.4					
CN STETTLER	DONALDA	DINOSAUR	77.1		77.1						
	DONALDA	FURLOW JCT.	30.9				30.9				
CN ENDIANG	HANNA	BYEMOOR	34.3		34.3						
	BYEMOOR	NEVIS	40.9			40.9					
CN ALLIANCE	FORRESTBURG	ALLIANCE	14.3		14.3						
CP ALBERTA CENTRAL	FORTH	OTWAY	58.0		—	—	58.0				
TOTAL REGION 14			393.6		206.2	71.4	116.0				

REGION 15

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network
- - - To be transferred to The Prairie Rail Authority
- To be abandoned, 1977-1981
- New construction
- Transfer from CP Rail to CNR
- Transfer from CNR to CP Rail



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REGION 15

CP Rail - Willingdon Subdivision

- From Lloydminster to Musidora, Alberta - 80.8 miles

The rail on this line is a mixture of 80 and 85 pound steel with a gross carrying capacity of 263 thousand pounds.

The delivery points are Streamstown, Marwayne, Dewberry, Clandonald, Derwent, Myrnam and Beauvallon. Alberta Wheat Pool, United Grain Growers, Cargill Grain Company and Pioneer Grain Company are represented at the various points.

Grain receipts on this subdivision have averaged 3.0 million bushels per year, in the ten years ending 1974-75. Average receipts equal 37 thousand bushels per mile of track.

This subdivision runs through one of the better mixed farming areas of northeastern Alberta.

If this line were abandoned, hauling distances from two of the larger points would be 23 to 25 miles to an alternate point.

The Commission recommends that the Willingdon subdivision be retained and placed in the basic network guaranteed to January 1, 2000.

CP Rail - Vegreville Subdivision

- From Willingdon to Vegreville, Alberta - 24.1 miles

This line was constructed between 1929 and 1930. The rail is primarily 72 pound steel mixed with 80 and 85 pound steel. It has a carrying capacity of 177 thousand pounds.

The only operating points on the line are Warwick, which has two Alberta Wheat Pool elevators, and Vegreville, which has two

United Grain Growers and one Cargill Grain elevator. Vegreville is also served by the Canadian National Vegreville Subdivision.

Grain receipts at Warwick have averaged 273 thousand bushels per year in the ten year period ending 1974-75. Receipts equal 11 thousand bushels per mile of track.

Alternate facilities are available at Willingdon, Hairy Hill and Vegreville for this grain.

The Commission recommends that the Vegreville Subdivision be abandoned on Dec. 31, 1977. It is suggested that a connection be built in Vegreville so that the Canadian National Railways can handle the grain from the elevators located on CP Rail trackage in Vegreville.

Canadian National - Haight Subdivision

- From Vegreville to Inland, Alberta - 8.8 miles

The line was constructed in 1909 with 60 pound steel and a carrying capacity of 177 thousand pounds.

Alberta Wheat Pool operate an elevator at Inland. It was constructed in 1945, with an estimated life of five to ten years.

Grain receipts on this subdivision have averaged 249 thousand bushels per year in the ten years ending 1974-75. Average receipts equal 28 thousand bushels per mile of track.

Alternate facilities are available in Vegreville, a distance of eight miles. Roads in the area are good.

The Commission recommends that the Canadian National Haight Subdivision be abandoned December 31, 1977.

Canadian National - Kingman Subdivision

- From Tofield to Kingman, Alberta - 13.0 miles

This line was constructed in 1909. It has 79 pound steel with a carrying capacity of 177 thousand pounds.

There are no grain delivery points on this line. No traffic of any kind has been generated since 1974.

This subdivision lies on the edge of a large coal field, however the Canadian National Demoy Subdivision handles most of this traffic.

There are no known plans for industrial development along this subdivision.

The Commission recommends that the Canadian National Kingman Subdivision be abandoned June 30th, 1977.

TABLE XI.15
Commission Recommendations For Category "B" Branch Lines
REGION 15

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED				
						1977 JUNE 30 DEC. 31		1978	1979	1980	1981
CN KINGMAN	TOFIELD	KINGMAN	13.0	80.8		13.0				
CP VEGREVILLE	WILLINGDON	VEGREVILLE	24.1				24.1			
CP WILLINGDON	LLOYDMINSTER	MUSIDORA	80.8							
CN HAIGHT	INLAND	VEGREVILLE	8.8				8.8			
TOTAL REGION 15			126.7	80.8		13.0	32.9			

REGION 16

LEGEND

— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - To be added to the Basic Network

— To be transferred to The Prairie Rail Authority
To be abandoned, 1977-1981

— New construction

- - - Transfer from CP Rail to CNR

++++ Transfer from CNR to CP Rail

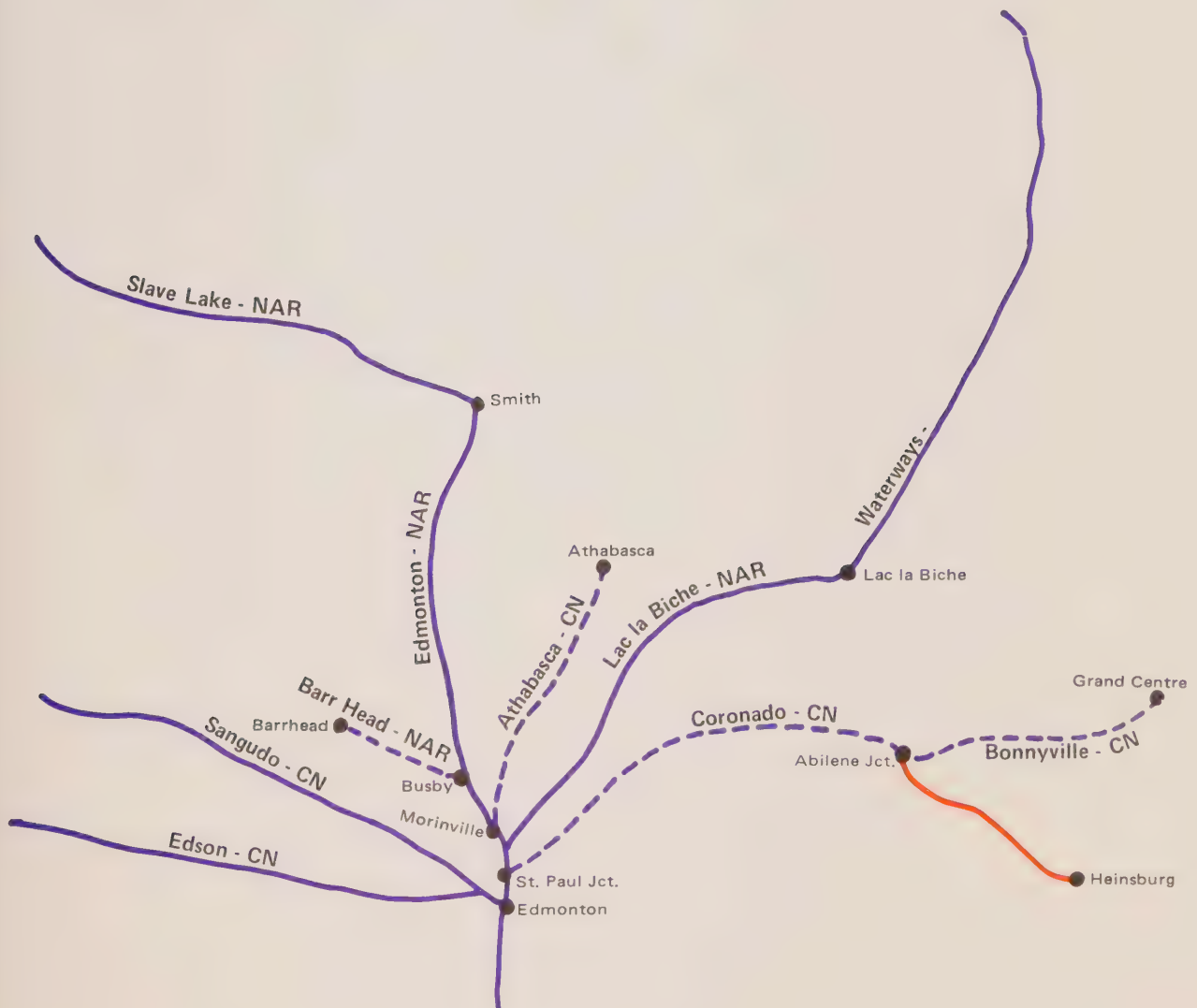


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REGION 16

Canadian National - Coronado Subdivision

- From St. Paul Junction to Heinsburg, Alberta - 160.0 miles

This line was constructed between 1917 and 1928. The rail is in good condition and has a gross carrying capacity of 220 thousand pounds.

The delivery points are Daugh, Gibbons, Redwater, Radway, Waskatenau, Warspite, Vilna, St. Paul, Elk Point and Heinsburg. Alberta Wheat Pool and United Grain Growers are the two companies represented at the various points.

Grain receipts on this subdivision have averaged 4.2 million bushels per year in the ten year period ending 1974-75. Average receipts equal 26 thousand bushels per mile of track.

Grain represents about half of the total freight carried on this line. The other major commodities are salt, from Lindbergh, and oil. The possibility of even greater heavy oil development in the area also has a bearing on the Coronado Subdivision. This oil has to be moved by either truck or rail, it cannot be piped due to its heavy viscosity. This subdivision has daily passenger service over a portion of the line. It also carries overhead traffic to the Bonnyville Subdivision, which services the Cold Lake Military Base.

The Commission recommends that;

- 1) The 108.1 mile section of this subdivision

between St. Paul Junction and Abilene Junction be retained and placed in the basic network guaranteed until January 1st, 2000.

- 2) The 51.9 mile section of this subdivision between Abilene Junction and Heinsburg be retained and placed under the jurisdiction of the Prairie Rail Authority.

Canadian National - Bonnyville Subdivision

- From Abilene Junction to Grand Centre, Alberta - 61.1 miles

This line was constructed between 1928 and 1930. The rail is in good condition with a gross carrying capacity of 220 thousand pounds.

Elevators are operating at Glendon, Bonnyville and Grand Centre. The elevators at Bonnyville and Grand Centre are in good condition with a life expectancy of 10 to 20 years. United Grain Growers and Alberta Wheat Pool are represented on this subdivision.

Grain receipts on this subdivision have averaged 878 thousand bushels per year in the ten years ending 1974-75. Average receipts equal 14 thousand bushels per mile of track.

Grain represents about one third of the traffic on this subdivision. The majority of traffic is supplies for the Cold

Lake Base operations.

The Commission recommends that the Bonnyville Subdivision be retained and placed in the basic network guaranteed to January 1st, 2000.

Canadian National - Athabasca Subdivision

- From Morinville to Athabasca, Alberta - 72.8 miles

This line was constructed in 1911 and 1912. It has a mixture of 60 and 85 pound steel with a very small section of 100 pound steel, the carrying capacity is 177 thousand pounds.

Delivery points are located at Morinville, Peavey, Legal, Vimy, Clyde, Colinton and Athabasca. Cargill Grain Company, United Grain Growers and Alberta Wheat Pool are represented on this line.

Grain receipts on this line averaged 2.8 million bushels per year in the ten year period ending 1974-75. Average receipts equal 39 thousand bushels per mile of track.

The area north of Athabasca has a large potential for agriculture and lumbering. A government supported project is underway to drain land, which will increase grain production.

There are also large gravel deposits in the area, as well as bentonite. IXL Industries state the line is necessary to supply their Edmonton plant with bentonite, as trucking 100 miles is uneconomical.

Canadian National claim that it is cheaper to upgrade the

Athabasca Subdivision than construct a connection from Colinton to Boyle.

The Commission recommends that the Athabasca Subdivision be retained and placed in the basic network guaranteed to January 1st, 2000.

Northern Alberta Railways - Barrhead Subdivision

- From Busby to Barrhead, Alberta - 26.5 miles

The rail is a mixture of 60, 70 and 100 pound steel with a gross carrying capacity of 192 thousand pounds.

United Grain Growers is represented at Monola; Alberta Wheat Pool and United Grain Growers are both represented at Barrhead. Four of the six elevators in Barrhead are in good condition.

Grain receipts on the subdivision have averaged 1.3 million bushels per year in the ten years ending 1974-75. Average receipts equal 49 thousand bushels per mile of track.

Barrhead is a regional centre and is showing a marked growth. There are lumber mills, logging and numerous small industries utilizing the Barrhead Subdivision.

The Commission recommends that the Barrhead Subdivision be retained and placed in the basic network guaranteed to January 1st, 2000.

Canadian National - Kerensky Cut-Off

A connection between the Canadian National-Coronado Subdivision and the Northern Alberta Railway-Lac LaBiche Subdivision at Kerensky would eliminate some 29 miles of parallel Canadian National and Northern Alberta Railway lines. The Commission requested that the railway companies study this proposed cut-off. A statement of the principal findings of the railways study of the Alberta Governments proposal for Northern Alberta in respect of this cut-off the railways, in their submissions to the Commission at Edmonton stated, "The proposal for construction of a new connection in the vicinity of Kerensky to eliminate some 29 miles of parallel CN/NAR route mileage immediately east of Edmonton has become somewhat more attractive in the light of proposed operating changes and capital requirements and is to be taken under active study by CN and CP Rail in conjunction with the NAR". A study team was set up to handle this project. In a letter of February 23rd, 1977, Mr. C.F. Armstrong, Vice President, Canadian National Railways Mountain Region, commented on this project:

"The study must go beyond the short term indication that, because the NAR trackage is soon to require upgrading, the CN trackage may be the best permanent route (in this event the town of Redwater would be on the retained list). This initial supposition must be examined in light of traffic and operating requirements associated with the potential long-term development of Northern Alberta. We must also integrate this project with plans for revision of the

Edmonton Terminal complex. In these circumstances, the study is complex and it is unlikely that final resolution of the issue will have been reached much before early summer, and therefore will not be available to you for inclusion in Justice Hall's report.

"It would be proper to say, however, that the study is underway by CN and CP Rail to determine whether some 29 miles of parallel CN/NAR route mileage can be eliminated without significant penalty to future traffic needs, and that further capital expenditures on both sections of line have been deferred pending a determination, etc."

The Commission recommends that upon completion of this study, but prior to December 31, 1977 the railways report the results of their study to the Minister of Transport.

TABLE XI.16
Commission Recommendations For Category "B" Branch Lines
REGION 16

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
						1977 JUNE 30 DEC. 31		1978	1979	1980	1981
HAR BARRHEAD	BUSBY	BARRHEAD	26.5	26.5	51.9						
CH ATHABASCA	MORINVILLE	ATHABASCA	72.8	72.8							
CH CORONADO	ST. PAUL JCT.	ABILENE	108.1	108.1							
	ABILENE JCT.	HEINSBURG	51.9								
CN BONNYVILLE	ABILENE JCT.	GRAND CENTRE	61.1	61.1							
TOTAL REGION 16			320.4	268.5	51.9						

REGION 17

LEGEND

———— Basic Network, Guaranteed to Jan. 1, 2000

Commission Recommendations

- - - - - To be added to the Basic Network
- - - - - To be transferred to The Prairie Rail Authority
- - - - - To be abandoned, 1977-1981
- New construction
- Transfer from CP Rail to CNR
- Transfer from CNR to CP Rail



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du Canada

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REGION 17

Northern Alberta Railways - Peace River Subdivision

- From Roma Junction to Hines Creek, Alberta - 52.8 miles

The rail on this line varies from 60 to 85 pound steel with a gross carrying capacity of 177 thousand pounds.

Delivery points on this section of the subdivision are Grimshaw, Berwyn, Brownvale, Whitelaw, Bluesky, Fairview and Hines Creek. Grain receipts on this portion of the subdivision averaged 4.8 million bushels per year in the ten year period ending 1974-75. Average receipts equal 91 thousand bushels per mile of track.

On a ten year average both Fairview and Hines Creek handle over 1 million bushels per year.

There is a large lumber mill at Hines Creek utilizing rail. This subdivision is in one of the developing areas of the Peace River Block, and has a potential for growth expansion.

The Commission recommends that the portion of the Peace River Subdivision between Roma Junction and Hines Creek be retained and placed in the basic network guaranteed to January 1st, 2000.

Northern Alberta Railways - Smoky Subdivision

- From Rycroft to Spirit River, Alberta - 5.3 miles

The rail is 60 pound steel with a gross carrying capacity of 177 thousand pounds.

Grain receipts on this portion of the subdivision have averaged 1.3 million bushels per year for the ten year period

ending 1974-75. Average receipts equal 238 thousand bushels per mile of track.

Grain production in this area is expanding with new acreage being brought into production each year.

Alberta Wheat Pool, Cargill Grain, United Grain Growers and Hanna's Seed Ltd., are represented in Spirit River.

The Commission recommends that the portion of the Smoky Subdivision between Rycroft and Spirit River be retained and placed in the basic network guaranteed to January 1st, 2000.

TABLE XI.17
Commission Recommendations For Category "B" Branch Lines
REGION 17

SUBDIVISION	FROM	TO	MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED				
						1977 JUNE 30 Dec. 31		1978	1979	1980	1981
CHAR SMOKY	RYCROFT	SPIRIT RIVER	5.3	5.3						
CHAR PEACE RIVER	ROMA JCT.	HINES CREEK	<u>52.8</u>	<u>52.8</u>						
TOTAL REGION 17			58.1	58.1						

CHAPTER 12

IMPLICATIONS OF REGIONAL RECOMMENDATIONS

IMPLICATIONS OF REGIONAL RECOMMENDATIONS

Summary of Recommendations

TABLE XII-1

Summary of Commission Recommendations

Category "B" Rail Lines

REGION	RAIL MILEAGE	ADD TO BASIC NETWORK	TRANSFER TO PRAIRIE RAIL AUTHORITY	TO BE ABANDONED					
				1977		1978	1979	1980	1981
				June 30	Dec. 31				
1	11.4	--	6.9	--	4.5	--	--	--	--
2	508.1	96.0	209.8	127.1	--	29.0	--	6.9	39.3
3	155.2	--	74.3	--	9.4	--	71.5	--	--
4	558.7	--	217.7(1)	32.7	80.7	138.3	--	19.0	70.7
5	449.9	163.6	235.7	--	--	50.6	--	--	--
6	763.4	383.0	310.1	28.8	33.6	7.9	--	--	--
7	101.5	--	37.8	10.9	26.8	--	--	--	26.0
8	360.2	54.1	144.4	52.3	48.4	--	--	61.0	--
9	357.4	--	202.1	--	104.8	--	25.5	--	25.0
10	226.4	--	95.8(2)	21.8	--	33.3	94.5	--	--
11	988.0	401.7	236.2	81.5	103.8	72.7	63.4	28.7	--
12	436.9	164.8	110.6	36.0	40.3	--	49.4	35.8	--
13	483.4	142.0	204.1(3)	58.7	33.9	--	--	47.7	--
14	393.6	--	206.2	71.4	116.0	--	--	--	--
15	126.7	80.8	--	13.0	32.9	--	--	--	--
16	320.4	268.5	51.9	--	--	--	--	--	--
17	58.1	58.1	--	--	--	--	--	--	--
TOTAL ALL REGIONS	6,299.3	1,812.6	2,343.6	534.2	635.1	331.8	304.3	199.1	161.0
				1,169.3					
(1) INCLUDES .4 MILES OF NEW CONSTRUCTION.									
(2) INCLUDES 19.0 MILES OF NEW CONSTRUCTION.									
(3) INCLUDES 3.0 MILES OF NEW CONSTRUCTION.									

Prairie rail mileage totals 18,736 miles. Of this total 12,414.3 miles or 66.2 percent are in the basic network guaranteed to the year 2000, and 6,299.3 miles or 33.6 percent were examined by this Commission. The Commission has recommended that 1,812.6 miles be added to the basic network category, 2,165.5 miles are recommended for abandonment

over a period of five years and 2,343.6* miles are recommended to be placed under the jurisdiction of the Prairie Rail Authority for their continuing assessment.

TABLE XII-2
Rail Mileage and Recommendations by Province

Rail Line Category	CNR	CPR	NAR	Total	Percent of Provincial Total
	-Mi.-	-Mi.-	-Mi.-	-Mi.-	%
<u>Province of Manitoba</u>					
Basic Network, Guaranteed till 2000	1,996.5	1,151.8	-	3,148.3	69.2
Recommended to be added to Basic Network	118.5	49.0	-	167.5	3.7
Recommended to be transferred to P.R.A.	464.5	136.2	-	600.7	13.2
Recommended to be abandoned	429.6	203.3	-	632.9	13.9
PROVINCIAL TOTAL	3,009.1	1,540.3	-	4,549.4	100.0
<u>Province of Saskatchewan</u>					
Basic Network, Guaranteed till 2000	1,865.2	3,101.5	-	4,966.7	59.0
Recommended to be added to Basic Network	763.4	281.8	-	1,045.2	12.4
Recommended to be transferred to P.R.A.	755.1	525.0	-	1,280.1	15.2
Recommended to be abandoned	727.5	394.7	-	1,122.2	12.4
PROVINCIAL TOTAL	4,111.2	4,303.0	-	8,414.2	100.0
<u>Province of Alberta</u>					
Basic Network, Guaranteed till 2000	1,924.8	1,563.3	811.2	4,299.3	74.5
Recommended to be added to Basic Network	242.0	273.3	84.6	599.9	10.4
Recommended to be transferred to P.R.A.	231.9	230.9	-	462.8	8.0
Recommended to be abandoned	150.0	260.4	-	410.4	7.1
PROVINCIAL TOTAL	2,548.7	2,327.9	895.8	5,772.4	100.0
<u>Prairie Provinces</u>					
Basic Network, Guaranteed till 2000	5,786.5	5,816.5	811.2	12,414.3	66.2
Recommended to be added to Basic Network	1,123.9	604.1	84.5	1,812.6	9.7
Recommended to be transferred to P.R.A.	1,451.5	892.1	-	2,343.6*	12.5
Recommended to be abandoned	1,307.1	858.4	-	2,165.5	11.6
SYSTEM TOTAL	9,669.0	8,171.2	895.8	18,736.0	100.0

* This includes 22.4 miles of new construction

Of the 2,165.5 miles of line recommended for abandonment, 534.2 miles are not now in use and can be abandoned June 30, 1977, at expiration of the current freeze. There are 138.6 miles of non-operating lines in Manitoba, 232.7 miles in Saskatchewan and 162.9 miles in Alberta. The Commission has recommended the abandonment of 1,631.3 miles of operating lines between December 1977 and 1981. Of the total operating mileage of 18,201.8 miles, recommended abandonments of operating miles constitute nine percent. In Manitoba recommended abandonments of operating lines represent 11.2 percent of the total operating rail mileage in that province; in Saskatchewan, 10.9 percent; and in Alberta 4.4 percent.

TABLE XII-3			
Operating Lines - Mileages and Recommendations			
Province	Operating Miles	Recommended Abandonment	Percentage
Manitoba	4,410.8	494.3	11.2
Saskatchewan	8,181.5	889.5	10.9
Alberta	5,609.5	247.5	4.4
TOTAL MILES	18,201.8	1,631.3	9.0

Of the 2,165.5 miles of line recommended for abandonment, 1,307.1 miles or 60.4 percent are Canadian National and 858.4 or 39.6 percent are CP Rail.

The Effect on Producers

The recommended closure of 2,165.5 miles of line over the next five years will affect approximately 6,750 permit book holders. In most cases, except where elevators are retained as off-line elevators, these producers will have to deliver to alternate rail delivery points. These 6,750 permit holders represent 4.4 percent of the grain producers in Western Canada, who in the ten years ending 1974-75 delivered an average of 35.4 million bushels of grain annually or 4.6 percent of average yearly producer deliveries.

In seeking out alternate delivery points, these producers will be required to deliver additional miles. These are not excessive. The Commission in its recommendations has been concerned that producers should not, through elevator or rail line closure, be required to haul grain in excess of the generally accepted 25 mile range. This will not be possible for all producers; however, its general application ensures no excessive burden will be borne by the great majority of producers. Many, even with the present overbuilt system, are actually hauling their grain in excess of 30 miles.

Primary Elevators

There are 206 elevators at the 113 delivery points on the 2,165.5 miles of line recommended for abandonment. Storage capacity at these elevators totals 13.0 million bushels, or 3.8 percent of the total prairie primary elevator capacity.

Receipts at six of these 113 delivery points have averaged less than 150 thousand bushels annually, 48 points have deliveries of less than 250 thousand bushels annually, with 57 having annual

receipts of 250 to 500 thousand bushels and two delivery points where deliveries have been in excess of 500 thousand bushels. Tables XII-4 and XII-5 show the reduction in delivery points and number of elevators which has occurred in the system in the previous five years.

TABLE XII-4 Receipts at Delivery Points to be Abandoned							
Receipts (000 bushels)	Year of Abandonment					Total	% of Total
	1977	1978	1979	1980	1981		
	Number of Delivery Points						
Less than 150	3	0	2	0	1	6	5.3
150 - 200	19	10	9	2	2	42	37.2
250 - 500	17	13	4	14	9	57	50.5
Over 500	2	0	2	2	2	8	6.0
TOTAL	41	23	17	18	14	113	
% of Total	36.3	20.4	15.0	15.9	12.4		100.0

TABLE XII-5 Delivery Point and Elevator Closures, 1972 - 1977		
Crop Year	No. of Delivery Points	No. of Elevators
1972-73	1,672	4,567
1973-74	1,617	4,383
1974-75	1,594	4,292
1975-76	1,556	4,165
1976-77	1,495	3,964
TOTAL CHANGE	- 177	- 603

Effect on Communities

The recommended closure of 2,165.5 miles of branch lines will mean the end of rail service at 113 delivery points between 1977 and 1981. Of these 113 delivery points, there are two incorporated towns, 23 incorporated villages and 88 unincorporated communities. Table XII-6 shows the population breakdown of the communities where rail service will be discontinued. Of the communities on these lines, 59.3 percent have a population of less than 50, 19.5 percent have 50 to 100, and 21.2 percent have over 100.

TABLE XII-6 Population of Communities on Rail Lines to be Abandoned							
Community Population	Year of Abandonment					Total	% of Total
	1977	1978	1979	1980	1981		
	- Number of Communities -						
0 - 50	26	17	11	7	6	67	59.3
50 - 100	9	3	4	2	4	22	19.5
Over 100	6	3	2	9	4	24	21.2
Total	41	23	17	18	14	113	
% of Total	36.3	20.4	15.0	15.9	12.4		100.0

Transfers of Ownership

The Commission has recommended transfer of ownership between Canadian National Railways and CP Rail as follows:

RECOMMENDED TRANSFERS OF OWNERSHIP
BRANCH LINES BETWEEN RAILWAY COMPANIES
CP RAIL TO CANADIAN NATIONAL

<u>REGION</u>	<u>SUBDIVISION</u>	<u>BETWEEN</u>	<u>MILEAGE</u>
4	Miniota	Quadra to Hamiota	11.4
	Lenore	Kenton to Wheatland	15.0 (1)
	Russell	Russell to Inglis	12.9
10	Colonsay	Dilke to Amazon	51.4 (2)
11	Matador	Wartime to Kyle	30.4

TOTAL MILES BRANCH LINES TRANSFERRED CP TO CN 121.1

- (1) CN to operate 0.4 miles new construction to connect Wheatland
(2) CN to operate 8.0 miles new construction Amazon to Watrous

CANADIAN NATIONAL TO CP RAIL

9	Gravelbourg	Mossbank to Gravelbourg	30.3
		Hodgeville to Tyson	4.4
10	Central Butte	Mawer to Central Butte	7.4 (3)
	Riverhurst	Central Butte to Riverhurst	18.0
11	Dodsland	Dodsland to Dewar Lake	32.6

TOTAL MILES BRANCH LINES TRANSFERRED CN TO CP RAIL 92.7

- (3) CP to operate 11 miles new construction Eyebrow to Mawer

These transfers are necessary to achieve the economies of operation which the new configuration demands and are mostly self-evident.

Colonsay Subdivision

In regard to the Colonsay Subdivision of CP Rail, this line serves no traffic purpose from Colonsay to Amazon a distance of 33.3 miles at the north end. At the south end it is a derelict having been washed out in several places between Dilke and Euston, a distance of 21.8 miles. Estimates given the Commission were that it would entail an expenditure of approximately \$4 to \$5 million to restore this section for continued use. The section is at shore level and is subject to periodic flooding.

Meadow Lake Subdivision

This subdivision runs from Tobey (Debden) to Meadow Lake a distance of 93.4 miles. It was at one time connected by CP Rail's Medstead Subdivision to Canadian National's Hatherleigh Subdivision at Medstead and thence to North Battleford over Canadian National's line on which CP Rail had running rights.

CP Rail applied for and should be given permission to abandon the Medstead Subdivision. CP Rail has access to the Meadow Lake line from Prince Albert to Tobey (Debden), having running rights over Canadian National's Blaine Lake and Big River Subdivisions from Prince Albert to Tobey, a distance of 60.8 miles.

The final result is that CP Rail's Meadow Lake Subdivision is now an orphan line, and there is no real justification for the

rehabilitation and operation of this line by CP Rail. It established that it was an uneconomic line. Even if the line carried grain at compensatory rates, the line would still be uneconomic even though it pays Canadian National a low price for the running rights to Prince Albert. Canadian National should not have to provide this service at a loss. CP Rail says it wishes to retain the line as an access route into northwestern Saskatchewan if, at any time, in the future some development should arise that would justify CP Rail building northward. The Commission is unable to justify CP Rail being subsidized to retain this line indefinitely at public expense on the off chance that it may prove viable to CP Rail in that distant future which even CP Rail does not foresee today.

Canadian National Railways serves the territory through Shellbrook to Tobey and to Big River and could effectively serve the Meadow Lake Subdivision in the same manner.

One further consideration has weighed with the Commission. There is an expanse of agricultural land between the North Saskatchewan River and the Beaver River, which, in the not too distant future, may justify connecting the rail line at Meadow Lake with Canadian National Railway line at Grand Centre in Alberta. Such a connection would provide a line to Prince Albert and Churchill from Northeastern Alberta. Strong representations were made to the Commission that a connection should be made from Frenchman's Butte in Saskatchewan to Heinsburg in Alberta, but in the view of the Commission that connection would be too far south to effectively serve the Beaver River area.

General

In these cases where transfer of ownership is being recommended the present owner would be entitled to be compensated for the value of the chattel property, but not the right of way, being transferred to the other railway company. There are exchanges both ways and the compensation payable should be mutually agreed upon or determined by arbitration.

The Canadian Transport Commission

Sections 253 and 254 of the Railway Act contemplate that it is the Canadian Transport Commission which can order the abandonment of a railway line.

This Commission is recommending the abandonment of a number of lines or parts of lines.

A literal interpretation of these sections might mean that if the Commission's recommendations are accepted by the Minister of Transport and the Government of Canada that the Canadian Transport Commission repeat the abandonment process before abandonment can actually be effected.

Such a duplication would be a totally useless expenditure of monies and manpower. The Commission has evaluated the lines giving full effect to the matters enumerated in Section 254 of the Railway Act as part of its mandate. It advertised its hearings extensively, held approximately 120 hearings and received over 1,600 submissions. Everything has been said and all submissions made.

The Commission recommends that, if necessary, the Railway Act be amended to relieve the Canadian Transport Commission of further involvement in the abandonment proceedings committed to the study by this Commission and of any future abandonments on lines under the jurisdiction of the Prairie Rail Authority.

Provincial Compensation for Road Costs

Provincial and municipal presentations to the Commission have highlighted road costs because of the potential transfer of costs from federal to local authorities in the event of rail line abandonment.

Submissions on the subject of road costs by the Provinces of Alberta and Saskatchewan have presented total cost estimates to allow for construction and extra maintenance resulting from line by line analysis of road impact which might take place if rail service were discontinued. The Province of Manitoba related total provincial road mileage to railroad mileage to determine a ratio which was then used to calculate the corresponding number of miles of road which would be affected upon removal of all Category "B" rail lines.

The estimation of potential road cost increases resulting from the impending abandonment of rail lines is complex in that a wide array of assumptions must be made. These assumptions begin with a decision regarding the basic concept of delivery point spacing or location for purposes of projecting traffic routes and volumes. Determination of road specifications and life of surfaces and subgrade goes beyond the simple application of engineering strength of material principles. Much input data for use in the engineering analysis is

based on somewhat arbitrary selection of factors such as vehicle description (truck size), timing and concentration of traffic and experience factors reflecting typical roadbed performance.

Factors involved in the assessment of road impact as determined by a review of studies to date are summarized under major headings in the "Road Costs" paper of Volume II.

Highway use and the impact of additional traffic would normally be assessed in terms of the increase in AADT (average annual daily traffic) with a further check to determine if it was expected that there would be a significant change in traffic composition. In appraising the effect of increased grain movement, it is appropriate to assess road impact from the standpoint of the increase in the number of heavily loaded vehicles. The change in total traffic is usually of little consequence.

It was determined that the degree of centralization expected to result from changes in collection point spacing will not result in significant increases in traffic on major road links. Increased grain haul traffic on oiled surface roads was the major concern. The life of pavement structures is almost directly proportional to increases in loading, whereas the effect on oiled surface roads is more difficult to predict by the application of engineering principles. Existing and potential traffic were compared with historical data in order to assess the impact of increased traffic on the secondary road system. This assessment took into consideration the timing and concentration of traffic as well as the size of vehicles making up the increase. The Commission research confirmed claims that the requirement for funds would come

about largely as a result of the necessity to upgrade some oil surfaced roads to pavement.

Public demand must be anticipated in the estimation of road costs, but the assessment of that portion attributable to removal of rail service is further complicated by the difficulty of relating cause and effect. The Commission is cognizant of the fact that a gravel road, which may serve adequately even with a considerable increase in loading, might be upgraded to pavement because of public pressure for "dust free" roads. Some portion of the cost of pavement might be assigned to the increased loading because of the fact that an oiled surface, though inadequate to handle this increase, would have satisfied the public demand under existing traffic.

Estimates of the Alberta and Saskatchewan governments were based on a fairly rigorous analysis in spite of the fact that the method of computing might be questioned from many different viewpoints. Different technically-oriented estimators might have great difficulty in coming to agreement on assumptions which are employed in the calculation of road costs resulting from removal of rail service. Recalculation of road costs assignable to the abandonment of specific rail lines indicates that the provincial estimates are high, however, the provincial data has been generally accepted by the Commission for purposes of defining the impact of rail abandonment.

The provincial estimates have been reviewed and translated into average annual costs. Average annual grain deliveries have also been totalled for all Category "B" branch lines. If one were to accept the blanket abandonment case as presented, the increased road costs would be equivalent to about an average of three cents per bushel for grain

deliveries which are relocated. Complete abandonment of Category "B" branch lines would result in an average cost of about one cent per bushel for all grain delivered across the prairies, since approximately one-third of the total grain is collected on the 6,300 miles of Category "B" lines.

Additional highway costs resulting from rail abandonment and "foreseeable" rationalization will not form a large portion of the cost of handling and transporting grain. The significance of the projected highway costs to the provinces, however, must be evaluated.

Action which will take place over the next five years as recommended by the Commission involves abandonment of slightly more than one-third of the Category "B" lines. Somewhat less than 15 percent of the total grain receipts on Category "B" branch lines will be relocated as a result of these closures. The Commission has applied its interpretation of the provincial governments' claims to this rationalization in order to estimate road cost increases. Annual road maintenance and amortized construction costs computed on this basis amount to approximately \$300 thousand for Alberta, \$600 thousand for Saskatchewan, and \$150 thousand for Manitoba.

The Commission anticipates federal-provincial negotiations will take place over the level of assistance which should be provided by the Federal government in lieu of cost transfers which will result from abandonment. Provinces and municipalities will face increased costs to cover incremental road costs. Railway subsidy savings will accrue to the Federal government by reason of abandonments.

The Commission recommends that:

- the federal government assist the provinces and municipalities in the higher incremental road costs they will face as a result of any branch line abandonments.

Municipal Taxation

Municipalities throughout the Prairies expressed concern over the loss of tax revenue in the case of railway abandonment. In many municipalities railway assessment and assessment of rail associated facilities comprise 10 percent and more of the total municipal tax base.

The effect on municipal residents is three fold: there is a loss of general revenue; road maintenance expenses are slightly higher due to increased grain haul, and farm costs are increased as well.

The Commission has considered these cost transfers from the railways and federal government to the municipalities. Other sections of this report deal with farm trucking costs and road costs.

The Commission recommends that an amount equal to five years taxes on lines recommended for abandonment be made available to the provinces from the federal government for distribution to municipalities on a basis proportionate to tax loss. It is further recommended that these funds be paid to the province immediately upon abandonment of railway mileage.

It is recognized that the effects on local government vary considerably with the greatest detrimental effect of abandonment on municipal revenues accruing to incorporated villages. However, it is being recommended that abandoned rights of way be returned to the Crown in

the right of the provinces for disposal in keeping with consultation with local government. Therefore, the higher the assessed value of the right of way the greater will be the return to the village or town for property released to it.

In some cases there will also be a distributional effect of loss of railway assessment due to the inter-municipal nature of school divisions, development areas, conservation districts, etc. The provinces will no doubt take these items into consideration in the allocation of funds in lieu of lost railway taxes.

CHAPTER 13

SUMMARY AND RECAPITULATION OF RECOMMENDATIONS

SUMMARY AND RECAPITULATION OF RECOMMENDATIONS

The grain handling and transportation system is an extremely complex one. It consists of a mix of private, co-operative and public ownership, varying degrees of public control and a great degree of misunderstanding. The Commission in its two years of study met no one who understood all facets, operations, transactions, mechanisms and interactions of the system. This is not unusual for an industry of such diverse interests. The Commission examined the operation and economics of the total system and makes recommendations which in the long run lead to the greatest return to the grain producers and the maximum development of opportunities for individuals and communities in Western Canada.

The Commission has evaluated present and future transportation needs within Western Canada and has proposed a program which will permit planning by those responsible. Transportation and economic development are dynamic concepts. Policies to encourage the development of both the primary and secondary agricultural industries in prairie Canada must also be dynamic. They must as well be flexible to meet the requirements of prairie Canada as they arise, rather than rigidly geared to any specific plan or forecast of future development.

A. THE RAILWAY SYSTEM

-- Branch Lines

- 1) In Chapter 11, the Commission is recommending the abandonment in stages to the year 1981 of 2,165 miles of grain-related

prairie branch lines. This 2,165 miles includes 534 miles which have not been in operation for as long as two years. (Chapter 11).

2) The Commission recommends that 1,813 miles of prairie branch lines become part of the basic rail network, guaranteed to the year 2000. (Chapter 11).

3) The Commission recommends that the remaining 2,344 miles of prairie branch lines be placed under a new body, the Prairie Rail Authority. Continuance of lines in this category would be conditioned on need. (Chapter 4).

-- Prairie Rail Authority

1) To provide the administrative, operational and financial arrangements necessary to best serve the public interest, and to provide a continuing assessment of branch line needs in a rapidly changing industry the Commission recommends the establishment of a three member body, based in Western Canada, the Prairie Rail Authority to be established January 1, 1978.

2) This body will minimize the difficulties of transition from the network now in place to a system designed for contemporary and foreseeable conditions (Chapter 4).

3) The Railway must be compensated for the cost of moving grain by rail. The railways must be then responsible for the adequate maintenance and any upgrading of lines now within the basic network or subsequently added to the basic network, guaranteed to the year 2000.

4) With the creation of the Prairie Rail Authority subsidies to the railways for grain related branch lines will cease. The Prairie Rail Authority will assume responsibility for costs and contracting for the operation and maintenance of these branch lines from General Revenue funds replacing federal subsidies now authorized by Section 256 and 258 of the Railway Act. (Chapter 4).

-- Northern Development Railway

1) The Commission recommends the establishment of a Northern Development Railways Department of the Canadian National Railways. (Chapter 4).

2) The Northern Development Railway would encompass the present Northern Alberta Railways (NAR), the Great Slave Lake Railway (GSLR), the Alberta Resources Railway (ARR) and the Athabasca and Sangudo Subdivisions of the Canadian National Railway.

3) The Commission recommends the establishment of open interchange points at Edmonton and Dawson Creek.

4) Construction of a rail line from Fort St. John, north eastward to a junction with the Manning Subdivision of the Great Slave Lake Railway.

5) Construction of a rail line to Valleyview, Alberta.

6) It is important to Canada to develop an effective Northern transport system, beyond that originally envisaged

as the Canadian National Development Department, involving, in due course, and as the economy permits, the construction of the Arctic Railway (Pages 127-131) to Inuvik. Meanwhile, the Study referred to on Page 127 should be reviewed and plans readied for the project when it is seen as the solution to the proper development of Canada's last frontier.

-- Rail Car Utilization

To increase the level of efficiency in car utilization, the Commission recommends:

- 1) An interchange of grain traffic between rail carriers, at open interchange points in Western Canada, to use the shortest least cost route to destination. Similar to the Calgary/Edmonton interchange agreement.
- 2) An interchange of traffic between carriers to provide CP origin cars access to port terminals of Prince Rupert and Churchill, now served exclusively by Canadian National.
- 3) The Government car fleet become interchangeable between railways. That cars not be assigned exclusively to one railway.
- 4) Expansion of the grain co-ordinator function to inland yards in Winnipeg, Kamloops, Edmonton and Calgary to ensure the movement of the grain required.

5) Rail car unloading at terminal elevators must be on a seven day per week basis.

6) That the Department of Transport and the railways undertake an experiment to modify present box cars with roof hatches and end unload gates, for use on the lighter prairie branch lines.

7) Future orders of hopper cars must be co-ordinated with the needs of the Prairie Rail Authority taking into account the large proportion of light carrying capacity lines under the Authority's jurisdiction where 70 ton capacity hopper cars are preferable in replacing box cars. (Chapter 6, Page 168).

-- Rail Car Allocation

The Commission recommends that upon request, the Wheat Board provide information to producers on rail car allocations to specific stations and blocks. (Chapter 6, Page 178).

-- Railway Subsidies

The Commission found that claimed losses on Prairie Branch lines for the period 1967-75 totalled \$423.1 million, and payment totalled \$290.3 million. The difference of \$132.8 million has accumulated over these years due to a number of unresolved issues between the railway companies and the Canadian Transport Commission. This Commission recommends the Canadian Transport Commission, in a report to the Minister of Transport, on or before July 31, 1977, should

identify the legal and costing issues and the amounts owing for each branch line, also advising the railways which items are disallowed, and the reasons therefore; a listing of these items which are holdbacks, the amounts and reasons, and establish a timetable for resolution of unresolved claims. (Chapter 6, Page 183).

-- The Producer Car

The Commission found that producer cars are not as easily available to producers as historic and current legislation intended. The Commission recommends:

- 1) The Canadian Wheat Board assume total responsibility for a producer car program;
- 2) The Canadian Wheat Board institute a program to increase the producers' awareness of producer cars;
- 3) Elimination of the eight hour loading time restriction;
- 4) Changes in the Income Tax regulations to permit producers to defer income on producer cars;
- 5) The railways to retain abandoned elevator sidings for spotting of producer cars for 12 months following elevator closures. (Chapter 5, Page 188).

-- Ashcroft Clinton Link

The Commission recommends that the right of way required for this link be acquired and that engineering plans be completed so that construction might take place quickly in an emergency situation. (Chapter 6, Page 192).

-- Parallel Rail Lines

The Commission recommends that parallel rail lines of the Canadian National and CP Rail between Saskatoon and Unity, Saskatchewan and between Moose Jaw and Regina, Saskatchewan be studied by the railways and if there are savings in joint track usage that the railways take such appropriate steps (Chapter 6, Page 193).

-- Electrification

Research into the application of electrification of Canadian Railways should be undertaken by Transport Canada. (Chapter 6, Page 194).

-- Railway right-of-way

1) The Commission did not deal with the benefits and burdens associated with public ownership of the roadbeds. In its view, this would require an extensive evaluation on a national scale before any recommendations could be made. (Chapter 6, page 195).

2) The Commission recommends that the right-of-way of all branch lines heretofore or hereafter abandoned, and not already disposed of, vest in the provincial Crown. (Chapter 4, Page 103).

-- Ancillary Charges

Grain presently stopped off for storage and/or milling in Western Canada has been subject to a stop-off charge. This charge is not subject to the statutory provisions that grain rates are and has, over the years, increased to 18 cents per hundredweight. The stop-off charge

inhibits full utilization of interior government terminals, inland cleaning and secondary agricultural processing on the prairies. The Commission recommends that this charge be eliminated immediately, and that the railway costs associated with stop-off be a part of the total cost of moving grain on the basic rail network. (Chapter 7, Page 212 and Page 231, Chapter 9, Pages 279, 284, 309).

B. THE PRIMARY ELEVATOR SYSTEM

-- Elevator Sites

The Commission is of the opinion that upon acceptance of the principle of compensatory rates that a negotiated lease, approved by the Canadian Grain Commission, should be the practice. The Commission recommends that an elevator company should have the option to either purchase or lease a site from the railway at a rate approved by the Canadian Grain Commission. (Chapter 5, Page 143).

-- Off Line Elevators

There are stations where some type of transportation service to grain elevators is imperative in order that producers in that area are not left in an impossible situation. The Commission has examined and evaluated a number of suggestions for the retention of service. In many cases present rail service was the more expensive option available. The Commission examined in some depth the concept of a mini-train operation, involving the use of lighter power and car

equipment and transloading facilities.* The Commission found that the mini-train concept while operationally feasible was not as practical a solution as the establishment of certain elevators as "off-line elevators". Grain receipts at these elevators would be transported to main line elevators by commercial truck at no additional cost to the producer.

The Commission recommends:

- 1) The establishment of an off-line elevator at Fisher Branch, Manitoba.
- 2) The federal government, through the Prairie Rail Authority pay the costs of trucking and additional handling at Arborg.
- 3) The elevator companies and the Prairie Rail Authority examine the feasibility of like operations at Cremona, Alberta; Gronlid, Waldheim, Arelee, Stewart Valley and Main Centre, Saskatchewan. (Chapter 5, Page 144).

-- Elevator Tariffs

The Commission recommends that:

- 1) The Canadian Grain Commission develop a standardized costing system for use by both the primary and terminal elevator system. Such accounting methods to be structured to ascertain separately the costs of cleaning, handling, storage and drying of grains.
- 2) Operators of primary elevators and terminals be required to report costs on a regular basis to the Commission for purposes of monitoring such costs and determining tariff levels.

* See Volume II

3) Elevator companies be required to show the applicable tariffs for handling, cleaning, storage and freight on the producer's cash ticket. (Chapter 5, Page 149).

-- Overbuilding and Closing of Primary Elevators

The Commission recommends that:

1) On rail lines under the jurisdiction of the Prairie Rail Authority -

- a) that elevator companies seeking to expand or build new plants first obtain the approval of the Authority;
- b) that elevator companies desiring to close an elevator file notice with the Authority and post such notice in the elevator for the information of their customers 12 months prior to the scheduled closing date.

2) On the Basic Network lines -

- a) that the Canadian Grain Commission and the elevator industry study this problem and develop an approach which will prevent overbuilding and undue competition in some areas and underservicing and a lack of competition in others. (Chapter 5, Page 150).

C. PORTS AND TERMINALS

-- Thunder Bay

The Commission recommends:

- 1) That dredging at Thunder Bay be resumed immediately.
- 2) That terminal switching at the Thunder Bay terminals be altered so that the switching by each railway closely parallels the country origins of each.
- 3) That a main line CP Rail bypass be constructed for through traffic at Thunder Bay.
- 4) The common gallery concept for the Richardson, Saskatchewan Wheat Pool and United Grain Growers terminals has merit and we recommend that it be implemented.
- 5) The Canadian Wheat Board should have the responsibility for co-ordinating the logistics for movement of all grain through Thunder Bay. The co-ordinator at Thunder Bay should be an official of the Canadian Wheat Board and must at all times on a daily basis have access to the necessary information as to train operations and vessel arrivals to effect and enforce this co-ordination function.
- 6) That unions be encouraged to continue their quest for common contract expiry dates. (Chapter 7, Page 197).

-- Interior Canadian Government Elevators

The Commission recommends:

- 1) Elimination of the railway stop-off charge for in transit grain.
- 2) Utilization of the interior terminals to the fullest extent possible to supplement the storage and cleaning capacity at Thunder Bay, Churchill, Prince Rupert and Vancouver.
- 3) Construction of a new interior terminal at Yorkton, Saskatchewan (Chapter 7, Pages 212 and 231).

-- Port of Churchill

The Commission recommends:

- 1) The railway stop-off charge for in-transit storage at inland government elevators be eliminated.
- 2) That the Canadian Government elevator at Saskatoon be fully utilized in the cleaning, storage and shipment of grain to Churchill.
- 3) A new Canadian Government elevator be built at Yorkton capable of cleaning, storing and shipping 25 to 30 million bushels per year to Churchill.
- 4) Rates be established from all CP Rail points in the area serving Churchill. These rates should be distance related and comparable to distance related grain rates on the Canadian National Railways. The railways be required to interchange

cars for Churchill at common interchange points.

5) That the Canadian Government work with local authorities in increasing the insurance season on grain carriers between Cape Chidley and Churchill and adjust the rate reflecting contemporary conditions.

6) The suggested new system for the management of Canadian ports will enhance the influence of local authorities in the development of the Port of Churchill and the Commission supports early passage and implementation of the legislation.

(Chapter 7, Page 202).

-- Vancouver

1) The Commission recommends the creation of a task force to co-ordinate rail operations in the Port of Vancouver and that WESTAC be engaged to structure such a task force. The Commission recommends that recommendations 18, 19 and 20 of the Report of the Honourable Mr. Justice E.D. Bayda, dated July 22, 1975 be an integral part of the study by WESTAC with a view to achieving the objectives which these recommendations envisaged. (Chapter 7, Page 226).

2) The Commission recommends that the grain car co-ordinator at Vancouver should have the authority to allocate and direct grain cars to the terminals and his orders should be carried out expeditiously and without fail by the railway companies.

This co-ordinator should be an official of the Canadian Wheat Board. (Chapter 7, Page 222).

3) It is recommended that control of traffic over the Fraser River Bridge be placed in the hands of Canadian National Railways in Vancouver. (Chapter 7, Page 223).

4) The Commission recommends that British Columbia Railway be given running rights over Canadian National from the southern terminus of British Columbia Railway to the points where its trains are taken over by Burlington Northern. The Canadian Transport Commission should impose equitable terms and conditions for these running rights in pursuance of the powers conferred to it under the Railway Act and The National Transportation Act. (Chapter 7, Page 225).

-- Squamish

Congestion on Burrard Inlet and environmental considerations may compel the establishment of a modern grain export terminal outside Vancouver, in which case Squamish could well be the first choice. If and when the Ashcroft-Clinton link is established, the potentialities of the Port of Squamish may be realized. (Chapter 7, Page 227).

-- Prince Rupert

The Commission recommends that the terminal at Prince Rupert be enlarged to a capacity of six million bushels and fully modernized, and that it be operated to its fullest extent as part of Canada's

grain export operations. Failing full utilization by the Canadian Wheat Board, the terminal should be entrusted (leased or sold) to a grain exporting concern which would have a financial incentive to use it to its full capacity. (Chapter 7, Page 228).

In addition, the Commission has recommended greater utilization of the Interior Canadian Government Elevators, (Chapter 7, Page 231), and the establishment of open interchange points to provide CP Rail grain access to Prince Rupert, (Chapter 6), both of which are designed to expand the export capability of the Port of Prince Rupert.

ECONOMIC DEVELOPMENT

The production and processing of agricultural products should take place in the regions of this country which have a natural geographic advantage for such activities. Freight rates and other transport related policies should not destroy nor hinder these natural advantages. The Prairie Region of Canada is basically an exporting region, and hence a major contributor to Canada's balance of payments position. Transportation policies should not detract from this position but should recognize its importance in the national interest.

-- Flour Milling Industry

The Commission recommends:

- 1) That the flour milling industry in Canada be permitted to enjoy the natural geographic advantage of locating in Western Canada.

- 2) That the Canadian Wheat Board re-assess its costs of services performed for this industry to ensure that its pricing practices do not distort the regional locational advantages of this industry.
- 3) That the Canadian Wheat Board discontinue the discriminatory practice of paying interest and storage costs on wheat held for milling at any point in Canada.
- 4) That the railway stop-off charge for storage and milling of grains in Western Canada be eliminated. (Chapter 9, Page 279).

-- The Rapeseed Crushing Industry

The Commission recommends:

- 1) That freight rates on rapeseed and its derivatives be set at levels which do not discriminate against the natural locational advantage of Prairie rapeseed crushers.
- 2) That inequities in freight rates, such as those that exist on the movement of rapeseed meal through Vancouver and Thunder Bay, be eliminated.
- 3) That the railways eliminate the additional charge of 14 cents per 100 pounds levied on the movement of rapeseed meal in hopper cars.
- 4) That the railways provide the same mileage allowance for tank cars used by rapeseed crushers as they do for other shippers.

5) That the Federal Department of Industry, Trade and Commerce devote more effort to export market development for rapeseed meal and oil.

-- The Livestock Processing Industry

The Commission recommends that freight rates on livestock and meat be set at levels which do not discriminate against the natural locational advantage of prairie livestock producers and processors.

-- The Malting Industry

The Commission recommends that:

- 1) The malting industry be permitted to enjoy the natural geographic advantage of locating in Prairie Canada.
- 2) The railway stop-off charge for storage and processing of grains be eliminated.
- 3) Malting plants located on the prairies be licensed as process elevators and be free to take delivery of malting barley direct from producers as well as from primary elevators.
- 4) Freight rates on malting barley continue on the statutory basis, and apply to both malting barley and barley malt.

TRANSFERS OF OWNERSHIP

The Commission has recommended transfer of ownership of 121.1 miles of Category "B" CP Rail trackage to Canadian National and 92.7

miles of Canadian National Category "B" trackage to CP Rail.

The Commission recommends that the CP Rail Meadow Lake Subdivision, from Tobey to Meadow Lake, although in Category "A", be transferred to Canadian National Railways. (Chapter 12).

THE CANADIAN TRANSPORT COMMISSION

The Commission is recommending the abandonment of a number of subdivisions and portions of subdivisions. The Railway Act, Sections 253 and 254, contemplate that it is the Canadian Transport Commission which can order abandonment of a railway line. This Commission has evaluated these lines giving full effect to the matters enumerated in Section 254 of the Railway Act.

The Commission recommends that, if necessary, the Railway Act be amended to relieve the Canadian Transport Commission of further involvement in the abandonment proceedings on the lines committed to the study of this Commission, and of any future abandonments on lines under the jurisdiction of the Prairie Rail Authority. (Chapter 12).

PROVINCIAL COMPENSATION FOR ROAD COSTS

The Commission recommends that the Federal Government assist the provinces and municipalities in the higher incremental road costs they will face as a result of any branch line abandonments. (Chapter 12).

COMPENSATION FOR TAX LOSS

The Commission recommends that the abandoned rights-of-way be returned to the Crown in the right of the respective provinces for disposal in keeping with consultation with local governments. Further it is recommended that an amount equal to five years taxes on lines recommended for abandonment be made available to the provinces from the Federal Government for distribution to municipalities on a basis proportionate to tax loss. (Chapter 12).

THE CANADIAN WHEAT BOARD

Throughout the hearings there was almost universal support for the Canadian Wheat Board. There is probably no single institution in Western Canada which affects the daily lives of farmers more than the Canadian Wheat Board. In some cases, there was mild criticism of some board practices in the areas of selling, car allocation, application of quotas, etc. However, there is no doubt that the board is accepted as the producers' friend. The Commission would not wish to imply that the Canadian Wheat Board is not doing a good job. The suggestions we make are intended to encourage it to do an even better one.

The Commission recommends that the Canadian Wheat Board play a more prominent role in the total co-ordination function of grain transportation. Grain movement co-ordinators, at Vancouver and Thunder Bay, should become Canadian Wheat Board employees and be

given extended powers over the ordering and placement of grain cars destined for those port areas. (Chapter 7).

The Canadian Wheat Board is vitally important to producers, and because it either directly controls, or has such great influence over the total selling mechanism, including handling and transportation, the Commission recommends that:

The Canadian Wheat Board establish a regional liaison office in each of Alberta and Saskatchewan to serve the farm community.

These offices should have daily updates on car allocation, quotas, grain requirements, ship movements, arrival dates, etc., to inform and keep informing farmers on specific market situations, and to carry out as much grain marketing extension as possible. These offices would also serve to answer producers' specific questions and help to solve problems they might have regarding quotas, pricing, producers cars, etc. The Commission is aware that it is only through an informed public that changes can be affected in the system which will benefit the total community.

Conversely these offices would keep the Canadian Wheat Board informed of problems arising in the field.

OTHER IMPORTANT PRODUCER CONCERNS

Throughout the hearings many matters were brought to the attention of the Commission which do not precisely come within the terms of

reference of the Commission, but were of concern to those individuals, and groups, who raised the matters.

The Commission did not have the resources necessary to examine in depth these problems and the implications of all possible alternative solutions. They are included because they are of major concern to many producers and require in depth examination.

1. Double Grading Standards

The Canadian grain grading system establishes two sub classes of statutory grades, viz: "primary standards, used to segregate grain at the primary elevator and "export standards" which are the grades used to classify export shipments out of terminal elevators.

Primary standards establish the minimum acceptable tolerance levels for weight, foreign material, seeds and other cereals etc., in export grain. These tolerance levels differ between the primary and export standards. Some export grade standards, particularly barley, encourage the blending of previously removed material.

Terminal elevator operators stated to the Commission that an increase in the small seeds tolerance levels in export wheat from .15 to .3 percent would increase the throughput of the Lakehead terminals by as much as 40 percent.

2. Protein Grading

Many producers proposed to the Commission that producers of higher protein wheats are not being adequately compensated for, or

provided with incentives to continue to produce high protein quality red spring wheats.

Requests for change arose generally in areas that produce higher protein wheats and experience lower yields than regions producing wheat with lower protein content. Proponents of protein grading argue that in a protein short world, providers of higher protein food stuffs should be compensated to offset lower yields.

In 1971, the Canadian Wheat Board started offering 1 and 2 Canadian Red Spring Wheat on a guaranteed protein basis, some 15 to 20 years after Canada's major competitors started the practice. In the current crop year (1976-77) provision has been made to pay a premium of 10 cents per bushel on carload lots of #1 C.W.R.S. if the protein content exceeds 15 percent. Samples submitted must test 15.2 percent protein and only one carlot will be accepted from a permit holder.

3. Grading of Grain - Moisture Content

Canada's export movements of grain can be slowed down by the arrival at port positions of large quantities of tough and damp grain. Two notable examples of this phenomenon occurred in the fall of 1968 at Vancouver, and more recently at Prince Rupert in February, 1977. These types of situations are of concern to producers and were brought to the Commission's attention on numerous occasions.

Producers argue there is no incentive to offer dry grain for sale. Actually there are financial rewards for increasing the moisture

content close to the maximum permitted for straight grade. The only incentives a producer now has to dry grain are that it may otherwise spoil while in farm storage, or that it will not be accepted at a country elevator in a tough or damp condition.

The following table indicates the initial return to a producer from one thousand bushels 2 C.W. red spring wheat, at a point with a freight rate of 20 cents per hundred pounds, containing 20 percent moisture (damp grade) and what happens when it is dried to various levels.

TABLE XIII-1			
	Net* Bushels	Initial Price/Bus.	Total
1000 bus. 2 C.W.R.S. 20% (damp)	995	\$ 2.54	\$2,527
Dry to 17% (tough)	959	2.73	2,618
Dry to 14% (straight)	933.3	2.81	2,622
Dry to 10% (straight)	886.7	2.81	2,491
* After Shrinkage Allowance			

For a producer who is letting his grain dry naturally, in the field, the alternatives can be assessed as follows:

If harvested at 20 percent moisture, and it can be sold or cooled to prevent spoilage, the one thousand bushels will bring \$2,527. If the grain is left in the field to dry to 17

percent, running the risks of a grade reduction from rain, the one thousand bushels will net \$2,618 or 3.5 percent more.

Leaving the grain in the field to further dry to 14.5 percent the gain is \$4.00 or .15 percent above harvesting at 17 percent.

If the grain dries to 10 percent, the loss is \$141 over harvesting at 14.5 percent moisture content.

The present grading system thus offers an incentive of \$131 per thousand bushels to add water to the grain to bring its moisture content from 10 percent up to 14.5 percent.

If a farmer has a heated air grain dryer it will probably cost 15 cents per bushel to reduce the moisture content from 20 percent to 14.5 percent or \$150 per one thousand bushels. The increase in value of the grain is \$95 so a producer would make \$55 more by not drying. This difference will increase if the grain is dried below 14.5 percent.

4. Grading System and Utility Wheats

Many producers in Western Canada have expressed their views regarding the introduction of new wheat varieties in Canada and the markets for these wheats.

Canada's reputation as a supplier of high quality milling wheats was established as a result of the superior qualities of Marquis wheat. Marquis wheat rapidly replaced all of the varieties previously grown. Even today a new variety must be equal to, or better than, Marquis before it can be licensed. The varieties of bread wheats grown in the prairies are still referred to as Marquis quality hard red spring wheats.

Canada's grading system has evolved over the years to meet changing market requirements but is essentially a system based on a visual assessment of these quality characteristics. The argument was advanced that the present grading system may inhibit the development of markets not requiring Marquis quality wheats.

Some have suggested that Canada's wheat industry is only geared to 20 percent of the market. They point out that a medium hard wheat with 11 percent protein is in the greatest demand throughout the world and that Canada does not supply this kind.

Plant breeders state that medium hard good milling wheats with either red or white kernels could be available in two or three years. These utility wheats have the capacity to out-yield present varieties by 30 percent but unfortunately they cannot be identified by a visual grading system.

No one suggested that these new utility wheats should be introduced without adequate safeguards to prevent mixing with the Marquis type wheats since this would be detrimental to markets needing high protein hard wheats. It was, however, argued that Canada should introduce new higher yielding lower quality wheats if markets exist for them, and it can be done without damaging Canada's reputation in the high protein hard wheat market.

The Commission agrees that all of the foregoing subjects are deserving of mature consideration as each in its own place can influence the scope and the economics of prairie agriculture.

STATUTORY RATES

The Commission recommends:

- 1) The retention of the Crow's Nest Statutory rates.
 - 2) That the difference between the statutory rate and the cost of transporting grain be paid directly to the railways.
- (Chapter 10).

CONCLUSION

We conclude by expressing our thanks to all members of our staff who served so diligently and with such good will throughout the past two years. Our thanks also go to the four provincial governments, and the multitude of other organizations, companies and individuals who made submissions and participated in the Commission's hearings.

ALL OF WHICH WE RESPECTFULLY SUBMIT FOR YOUR CONSIDERATION.



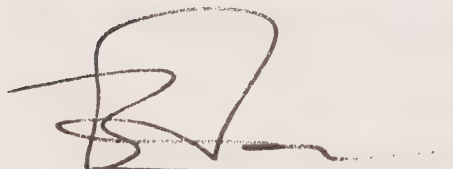
L.G. Stewart
Commissioner



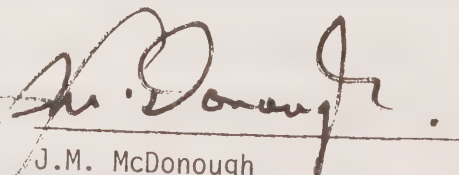
Hon. Emmett M. Hall, Q.C.
Chief Commissioner



R. Lehr
Commissioner



R. Forbes
Commissioner



J.M. McDonough
Executive Director



R.H. Cowan
Commissioner

MAP SHOWING PRESENT RAIL NETWORK
PRAIRIE PROVINCES - APRIL 1977

ChR ——— Basic Network, Guaranteed to
C.P. Rail January 1, 2000
CNR ——— Lines Frozen for Evaluation by
C.P. Rail Rail Commission

Regional Boundaries

Government of Canada
Government du Canada
Rail Commission Commission Rail

0 10 20 30 40 50
Kilometres Miles



MAP SHOWING RECOMMENDED RAIL NETWORK
PRAIRIE PROVINCES - APRIL 1977

- | | | |
|-----------------------------------|-------|---|
| CNR | ———— | Basic Network, Guaranteed to January 1, 2000 |
| C.P. Rail | ++++ | |
| <u>Commission Recommendations</u> | | |
| CNR | ----- | To be Added to the Basic Network |
| C.P. Rail | ++++ | |
| CNR | ----- | To be Transferred to the Prairie Rail Authority |
| C.P. Rail | ++++ | |
| CNR | ----- | To be Abandoned, 1977 - 1981 |
| C.P. Rail | ++++ | |

Government of Canada
Government du Canada
Hull Commission Commission Hull

0 20 40 60 80 100 Miles

